THE IMPACT OF PREVIOUS LIFE EXPERIENCE ON COGNITIVE STRUCTURE
CHANGES AND KNOWLEDGE ACQUISITION OF NURSING THEORY AND
CLINICAL SKILLS IN NONTRADITIONAL NURSING STUDENTS

A dissertation submitted to the
Kent State University College of Education,
Health, and Human Services
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy

by

Pamela A. Walker Meinert

August 2008

A dissertation written by

Pamela A. Walker Meinert

B.S.N., Gannon University, 1981

M.S.N., University of Pittsburgh, 1989

Ph.D., Kent State University, 2008

Approved by

_____, Co-director, Doctoral
Averil Mcclelland, Ph.D.   Dissertation Committee

_____, Co-director, Doctoral
Christopher Was, Ph.D.   Dissertation Committee

_____, Member, Doctoral
Kathleen Adamle, Ph.D.   Dissertation Committee

Accepted by

_____, Chairperson, Department of
Awilda Hamilton, Ed.D.   Educational Foundations and
                                    Special Services

_____, Interim Dean, College and Graduate
Donald L. Bubenzer, Ph.D.   School of Education, Health,
                                   and Human Services

AKNOWLEDGEMENTS

I would like to recognize and thank the following individuals:

Dr. Averil Mcclelland has provided valuable perspective, support and wisdom from the very beginning of this dissertation process. She has provided a steadying influence during difficult periods and has encouraged me along the way.

Dr. Christopher Was has provided guidance and objectivity during this dissertation process. His assistance with the data analysis allowed me to develop greater insights into the significance of the findings.

Dr. Kathleen Adamle has contributed her nursing education expertise and perspective to this project. Her experience in the clinical education of nursing students helped me to focus on key aspects of the data interpretation and its' application.

To my husband Bob: Thank you for your unfailing support, patience and understanding in all aspects of this dissertation process. I could always count on his guidance, sound judgment and computer skills when I needed them.

To my children, Kevin, Julie Anne and Thomas: Thank you for your understanding, patience, encouragement and unfailing confidence in me. You inspired me to push forward during this dissertation process in dark and difficult times.

To my parents, Edward and Jo Ann Walker: Thank you for emphasizing the importance of education and instilling in me a love of learning. Finally, I want to thank my parents for cultivating a strong sense self efficacy in my abilities which have served me well during this dissertation process and throughout my life.

MEINERT, PAMELA A., PhD., August 2008   Educational Psychology

THE IMPACT OF PREVIOUS LIFE EXPERIENCE ON COGNITIVE STRUCTURE
CHANGES AND KNOWLEDGE ACQUISITION OF NURSING THEORY AND
CLINICAL SKILLS IN NONTRADITIONAL NURSING STUDENTS (167 pp.)

Co-Directors of Dissertation: Averil Mcclelland, Ph.D.
                                Christopher Was, Ph.D.

        This mixed methods research study used a natural inquiry approach to investigate the effects of previous life experience on learning in nontraditional nursing students.

        A moderate, positive correlation suggested that academic ability was related to theory course grades without regard to the amount of previous life experience.

        The theme of Dimensions of Role Transition contained interpersonal and intrapersonal changes in relationships with peers, faculty, patients and within themselves. Strong caring feelings, high personal expectations, reality shock and personal conflict were components of the nontraditional students' transition to nursing.   The instrumental role of the faculty was a recurring theme in the student's ability to adapt or reconcile their life experiences with learning in the classroom and clinical experience.

        The theme of Cognitive Restructuring identified knowledge conflict, cognitive resistance, and affective qualities as aspects of the integration of new knowledge into existing cognitive structures.

        Nontraditional nursing students bring a lifetime of previous life experience which can be a rich avenue for faculty to support knowledge acquisition and conceptual change. These students have unique responses to learning which should to be identified and understood by faculty in order to foster their educational development.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

Background

Higher education has been traditionally geared to meet the academic, social and psychological needs of the traditional age student. But, the number of nontraditional students in higher education has steadily increased over the past twenty years.   Most authors agree that the nontraditional student is 25 years of age or older, may or may not have previous higher education experience, and has not remained in the educational system continuously since high school. The traditional student has been defined as being 18 – 24 years of age and has remained in the educational system continuously since high school (Bueche, 1986). The prevalence and the anticipated growth of the nontraditional student population in higher education today are easily appreciated statistically. Figures for undergraduate college enrollment from the National Center for Education Statistics (2006) describe the proportion of students 25 years old and older rose by 17% between 1990 and 2004. The NCES projects a 15% increase in enrollment of nontraditional nursing students from 2004 to 2014. These numbers reflect population trends and changing attitudes in our society. The population itself is shifting to an older, more mature one.   The US Census Bureau estimated the median age for Americans in 2006 to be 36.6 years. This is up from the median age of 30.2 years in 2000.

Nontraditional Students in Higher Education

Multiple economic and social factors have also influenced the increase in enrollment levels of students in higher education. Nontraditional students note their reasons for delaying their college entry were twofold. They mentioned financial considerations and a desire to gain life/work experience (Brodzinski, 1980). The rise in nontraditional students continues to be the result of an economic decline in blue collar jobs leading many to enter school to prepare for better jobs (Bean & Metzner, 1985; Brodzinski, 2000).   In addition to the economic factors, several key social factors have helped to account for the rise of older students in higher education. Traditional women's work roles have changed as have society's views of their capabilities. As a result, women account for over two-thirds of all undergraduate enrollments among nontraditional students (Levine & Associates, 1990). Female labor force participation data from 1969 to 1995 show the supply of nursing students has decreased over time as women have entered law, medicine, and management (Kalist, 2003). Another change in social norms has been the widespread acceptance of the lifelong learning concept and the subsequent rejection of age-related roles (Cross, 1981).

How the nontraditional student fits into the higher education system has been a significant research question explored in the literature for the past 30 years. Initially, the work of Malcom Knowles on Adult Learning theory was studied in relation to nontraditional students. Although the theoretical literature supports the use of Adult Learning theory with adult learners (Knowles, 1970), many research studies have not consistently agreed with this theory. Beder and Carrea (1988) found no support for their

hypothesis that students of teachers who had received training in adult learning techniques would be more satisfied and have a higher rate of attendance than students of teachers who did not receive such training. Another study found that nontraditional student participation in planning learning programs did not result in higher student achievement or satisfaction (Rosenblum & Darkenwald, 1983).

Several studies have focused on the preferences of nontraditional students' learning styles. Werring (1984) found no significant difference between traditional and nontraditional students learning styles. These findings do not support the widely accepted assumption that adults are self-directed learners. This study found that differences in learning styles were found to be related not to the age of the student but to their status in the undergraduate program. Specifically, upper division students were more likely to prefer independent study modes than lower division students. This suggests that differences in learning style are more a function of the growth within the student role, rather than the age of the student.

Other research that contradicts beliefs regarding adult learning theory and nontraditional students include work by Ross (1989) and Loesch and Foley (1988). Ross (1989) found that nontraditional students preferred the use of lecture format and teacher dominance in the classroom. Loesch and Foley (1988) used the Learning Preference Inventory with adult learners to investigate learning preferences. The Learning Preference Inventory is an objective measure to identify learner preferences toward student or teacher directed learning activities. The study found that while some adults preferred student-structured learning reflective of self-directedness, others preferred

teacher-structured learning. Neither type of learning was found to be dominant in adult

learners (Loesch & Foley, 1988).

Finally, Tracy and Schuttenberg (1986) found that the majority of nontraditional

students enrolled in college courses perceived the instructor to be the expert. While some

students favored collaboration in course planning, they indicated that their preference

would depend on the type of course. This study indicates that not all nontraditional

students prefer teaching strategies reflective of Adult Learning principles. The authors

suggest that there are several factors which may influence teaching preferences, such as

past experiences, locus of control, and self-concept as a learner.

One of the few studies to support the application of Adult Learning theory with

nontraditional students was done by Conti and Welborn (1986). They found that teaching

style significantly affected learning in nontraditional students. The use of the

collaborative mode of teaching resulted in greater student achievement among

nontraditional students than other teaching styles (Conti & Welborn, 1986).

A critical area of research interest with nontraditional students is the issue of

retention and attrition. Bean and Metzner (1985) developed a theoretical model of

nontraditional student attrition. Attrition is defined as a student leaving an educational

setting without completion of a course of study or degree attainment. They have found

that nontraditional students have higher rates of attrition than traditional students.

Specifically, this model suggests that nontraditional students are at higher risk for

attrition within the first six months of enrollment in a program of study than traditional

age students. It is suggested that the lack of academic, financial, and social resources

specific to the needs of the nontraditional student may play a role in the issue of attrition.

Based on this foundation and the coupling of the increase in nontraditional student

population, higher education research has studied ways to predict nontraditional student

success in order to make admission decisions. These studies agree that student retention

and attrition prediction is a complex process which includes the following variables:

grade point average, gender, race, academic aptitude, parental socioeconomic level, goal

commitment, institutional commitment, academic and intellectual development, financial

difficulties, personal problems, availability of academic supports, and persistence (Tinto,

1975; Metzner & Bean, 1987; Braxton, Brier & Hossler, 1988). Further research has

looked at the needs and characteristics of nontraditional students as compared to

traditional students and found significant differences regarding anxiety (Hight, 1996), test

anxiety (Waltman, 1997), characteristics and problems (Flannery & Apps, 1987), and

cognitive development (Thomas, 1990).

Nontraditional Students in Nursing Education

By the late 1980s, the nontraditional student in Nursing Education was beginning

to surface as a separate research entity. Although characteristics of the nontraditional

student in higher education had been identified, there was a gap in the area of

nontraditional students in nursing education.

The body of more general quantitative research provided a broad base for educators to

draw upon for development of research on nontraditional students in Nursing Education. This

research has been of critical value in the recruitment, retention, and graduate success of

nontraditional nursing students. These students play an important role in maintaining and

increasing the nurse population to meet the demands of the aging baby-boomer population and

high technology health care requirements. At the beginning of the twenty-first century, the health

care system in the United States is experiencing a shortage of nurses and an increase in the

average age of the working nurse.

> According to the Bureau of Labor Statistics, one million new nurses will be
> needed by the year 2010. Studies conducted by the General Accounting Office,
> the American Hospital Association, health care consulting groups and academic
> researchers all confirm that a new nursing shortage is impacting the delivery of
> health care in the U.S. The shortage is expected to intensify over the next decade
> as baby boomers age and a large percentage of the current nursing workforce
> retires. (Nevada Nurses Association, 2002, p. 1)

As the population has aged, the need for professionally educated nurses has

dramatically increased every year spanning the last twenty years. This has resulted in a

heightened concern for student recruitment and retention. Brodzinski defines retention as

a student remaining in a nursing program until graduation (2000). Nontraditional students

have been entering nursing education in increasing numbers but tend to have lower

retention rates than traditional nursing students (Brodzinski, 2000). Therefore, these

students are of particular interest to nurse educators as they try to support nontraditional

nursing students' academic achievement and learning.

The characteristics of nontraditional nursing students have been studied since the

late 1980s in a variety of areas. These quantitative studies found similar inconsistent

results in learning styles and teaching preferences. Several studies found no differences

between traditional and nontraditional nursing students in the areas of preferred teaching

methods (Seidl & Sauter, 1990), self-directed learning (Linares, 1989), learning styles (Merritt, 1983), and the relationship between achievement and teaching methods (Russell, 1990). Other studies have found significant differences between traditional and nontraditional nursing students in academic self concept, time management and study organization skills (Waltman, 1997), and in classroom teaching preferences (Thompson & Sheckley, 1997). Affective domain research on nontraditional nursing students added significantly to the education research literature by finding significant differences between traditional and nontraditional nursing students in adult development (Bueche, 1986; Meinert, 1989), life stage (King 1986), need for support services, self-efficacy (Jeffreys, 1998), and motivation (Rebellino, 1996).

King (1986) combined the concepts of life stage and teaching/learning preferences in the study of traditional versus nontraditional nursing students. The findings reveal that nontraditional nursing students were at different life stages than traditional nursing students in areas of career development, family, and work responsibilities. The findings regarding teaching/learning preferences seem to support the bulk of the research literature that traditional and nontraditional students do not differ significantly regarding preferences for teaching methods. This study concludes that instructional methods do not seem to affect learning outcomes for nontraditional nursing students.

In summary, these quantitative studies show inconsistent differences regarding teaching and learning styles between traditional and nontraditional nursing students. But consistent differences were seen in the areas of adult development and the affective

domain regarding traditional and nontraditional nursing students. These differences in the affective domain are a new area of research for nurse educators to explore. The affective domain includes student characteristics related to attitudes, values, motivations and feelings (Santrock, 2001).

Recently, research in this area has expanded further into the affective domain. Motivation for nontraditional nursing students differs from that of traditional nursing students in terms of life and role satisfaction as a student. For the nontraditional nursing student, personal satisfaction and the satisfaction of internalized goals are a major reason many nontraditional students return to school. They seem to have a life-centered orientation to learning and a desire to improve their employment status through education (Rebellino, 1996).

Nursing education research has continued to delve further into the affective domain with nontraditional students to look at a more complex combination of variables. Shelton (2000) investigated academic self-efficacy and perceived faculty support as predictors of persistence and academic performance in nontraditional nursing students. The combination of these factors did not predict persistence and academic performance as well as the single variable of perceived faculty support. Self-efficacy alone was found not to predict academic success or persistence.

Qualitative Research and Nontraditional Nursing Students

Qualitative research on nontraditional nursing students began to emerge in the literature as recently as 2000. These qualitative studies drew heavily from the work of

Malcom Knowles. Adult Learning theory describes adults as more self-directed, self-reflective and able to change their perspectives during learning. They are more predisposed to bring their life experience to what they learn and to the way they learn (Knowles, 1962). One of the central themes of Adult Learning theory is that adult education should be practice oriented and based on real life situations. Knowles acknowledges that learning is greatly influenced by the perceptions of the student (Knowles, 1970). This supports the use of qualitative research to investigate the perceptions and life experiences that nontraditional nursing students bring to learning.

One of the earliest descriptive studies of nontraditional students identified that the greatest asset of nontraditional students may be their wealth of life experience and maturity (Hallenbeck, 1966). They have either worked or raised families, and dealt with marriage, divorce, child-bearing, sickness, and death. Hallenbeck (1966) stated that "education starts when an individual begins to understand that there is a relationship between the experience and the knowledge" (p. 169).

Recently, qualitative studies of nontraditional nursing students have tried to examine issues within the affective domain. Spouse (2000) performed a longitudinal qualitative study regarding the perceptions of nontraditional nursing students and their changes in perception based on experiences. Findings indicate that students' perceptions of nursing had a profound influence on their persistence and motivation during the four year program. The variables of persistence and motivation were measured by subjective attitudinal statements regarding self efficacy and graduation rates. These findings

indicate that a better understanding of the students' form of *personal knowing* may

facilitate clinical and academic achievement (Spouse, 2000).

A recent educational study in Finland, examined the changes in nursing students'

attitudes on nursing expertise and life experience. Nontraditional nursing students with

previous expertise or life experience of caring for patients cited the need for more clinical

skills and knowledge as important to them during their education. Caring attributes of

these students were unchanged during the program of study. Students describe these

caring attributes as arising from previous life experience. Students were also able to

describe differences between theory and clinical practice unrecognized prior to the study

(Vanhanen & Janhonen, 2000).

Wade (1998) developed a theoretical model of personal transformation to

illustrate its application to nursing education. Personal transformation is an

individualized process of expanding consciousness whereby individuals become aware of

old and new self-views and choose to integrate them into a new self-definition. This

process is used by the student to become aware of personal assumptions that may

constrain new perspectives in learning. This process of choosing to change and expand

personal assumptions is critical to the learning process (Wade, 1998).

Role of the Faculty

Expectations of nursing faculty by nursing students have been explored on many

levels in qualitative research. Grassi-Russo and Morris (1981) found that student nurses

expect nursing faculty to be a positive role model while providing support and

demonstrating empathy to students. Constant reinforcement during a clinical experience was cited by students as being an important component of their satisfaction with the role of the faculty.

The impact of a stressful experience for a student nurse and the relationship with faculty was investigated by Kushnir (1986). Stressful situations ranged from strong emotions about a situation, discovery of an error by the student, or having a lack of knowledge about a particular clinical situation. This study found that the student may not discuss stressful situations with faculty due to embarrassment and fear of failure. Kushnir makes the point that if one of the aims of our teaching is to provide for safe patient care, then students need to feel comfortable to discuss stressful situations without fear of failure or embarrassment.

Mashburn (1985) reported that program factors and personal student factors had an impact on successful program progression in nontraditional nursing students. One of the faculty responsibilities to come from this study was to allow "students to develop personal pathways to learning" (Mashburn, 1985, p. 53). Faculty need to understand the individual student's learning experience in order to develop these pathways.

Nursing faculty strive to teach students to provide holistic care to patients. By the same token, nursing faculty and students need to get to know each other in a more holistic way in order to understand and communicate effectively with each other. Nursing faculty need to explore the following areas with students: beliefs, feelings, interactions with staff, and past and current experiences (Streubert, 1989).

Other research has found a need for faculty to discuss affective needs of nursing students. Klisch (1990) looked at the experience of student nurses caring for AIDS patients and found strong emotional responses by the students. The majority of the students did not approach the faculty to discuss these feelings, but once approached were inclined to discuss them. Students reported satisfaction with the faculty role when affective responses were discussed by faculty in an empathic, but professional manner.

Nells (1990) conducted a phenomenological study to investigate the role of faculty in discussing life experiences with students related to current learning. These findings support the role of faculty expanding to include the use of previous life experiences in learning content knowledge.

> The fact that these students have these personal knowledge experiences [and] the fact that these experiences are meaningful to their lives…is highly significant. However, as these students revealed, recognizing these experiences and sharing these experiences is not an integral part of their nursing education. (Nell, 1990, pp. 291-292)

This study suggests that previous life experiences can expand the definition of curriculum, in order to make learning more meaningful to the learner. "Curriculum is not curriculum until its meaningfulness is revealed in the lives of those experiencing it" (Nell, 1990, p. 292).

Nell suggests that faculty provide structured opportunities to share these experiences and "the meanings that all aspects of nursing education create in their lives. These opportunities need to be viewed and valued as valid educational activities just as lectures, skills practice and clinical experiences are [valued]" (Nell, 1990, p. 295).

This role expansion for faculty can be viewed from the role structure of coaching. Anselm Strauss notes that the role of a coach includes both guidance in physical skill acquisition and the interpretation of the learners affective responses.

> The coach stands ready to interpret his [learner's] responses, which may otherwise only have the status of ambiguous signs. Someone must stand prepared to predict, indicate, and explain the [affective] signs. (Strauss, 1966, p. 351)

This body of research focuses on the importance of faculty understanding the previous life experiences that can result in affective responses to enhance learning in a holistic manner.

Constructivism and Nursing Education

Until the 1980s, nursing education had traditionally been aligned with a medical model of care that emphasized task completion and technical competence (Clarke, 1986; Rolfe, 1996). The last 25 years in nursing and nursing education has seen a refocusing on the holistic, individualistic, and therapeutic practice of nursing. The advent of nursing diagnosis and independent nursing interventions in the 1980s has required nursing education to change the paradigm of teaching. Critical thinking skills are a major thread in nursing education curriculum today. Contemporary nursing practice and education encourages nurses to assess, act, and evaluate using critical thinking to provide individualistic care. A constructivist paradigm is more conducive to the use of teaching critical thinking skills and contemporary nursing practice (Peters, 2000).

The philosophy of constructivism in learning challenges the concept of truth or objective knowledge and replaces it with reality experienced by the learner. The

constructivist learner uses "an active process in which (they)… construct knowledge in a way that makes personal sense" (Tippins, Tobin, & Hook, 1993, p. 223).

The root term of *construction* is appropriate because it "summarizes the epistemological view that knowledge is built by individuals" (Cobern, 1993, p. 51). When learners come with knowledge acquired from past experience, they build new knowledge on this existing knowledge. A constructivist philosophy during nursing education allows the nontraditional student richer learning opportunities. Building new knowledge on existing knowledge fosters "enhanced self-direction in learning and meta-cognitive development (while it) empowers students with problem-solving, reflecting, and evaluating skills" (Cust, 1995).

Identification of the Problem

Previous qualitative studies have explored the perceptions, experiences, and personal transformation of nontraditional nursing students. The effect of previous health care life experience alone on nontraditional nursing students' learning is not found in the literature.

Nontraditional nursing students have had life experiences in all areas of health care. These students have cared for family members, friends, and even themselves with many types of acute and chronic physical and mental health conditions. For some nontraditional nursing students, their previous life experience is the very reason why they have chosen a career change to nursing at this point in their lives. This phenomenon leads

educators to ask what effect these life experiences may have on learning for nontraditional nursing students.

Rationale of Research Approach

Due to the affective and experiential nature of the problem, qualitative methods are best suited to investigate the role of previous health care life experience on the process of learning nursing skills and theory. Narrative Inquiry is the theoretical approach for this study. Narrative Inquiry focuses on the ways in that people "produce, represent and contextualize experience and personal knowledge through narratives" (Coffey & Atkinson, 1996, p. 56). The goal of Narrative Inquiry is to understand how individuals structure experience to make sense of the events in their lives. Narrative data provides first person accounts of personal experiences. Data is presented in stories in a holistic form. This approach allows the data to reveal how experiences are organized. Subjects will only remember experiences that are significant to them. Therefore, the data obtained will be personally important to the student.

Significance of the Problem to Nursing Education

Constructivist theory actively incorporates the prior life experiences of the student and uses them as a means of instruction. For example, a discussion on the topic of asthma from the viewpoint of varying student life experiences broadens the learning as each student will have had different life experiences. This learning can be transmitted into practice in a clinical setting when students see varying presentations of asthma.

Many different clinical experiences can be used to develop critical thinking skills when the prior life experiences of students are explored. Learning to transfer knowledge from theory to individual patient application is a critical component in nursing education. The exploration of the construction of new knowledge from existing cognitive structures built by previous life experience can benefit both student and teacher. The student can develop meta-cognitive skills to understand their own individual process of learning. The teacher can develop new strategies to foster learning and knowledge transfer to variable situations as seen in a clinical experience. This demonstrates the importance of examining the prior life experiences of nontraditional nursing students.

Nursing education has always used current life experience to teach students with the use of clinical experience with real patients. Nontraditional nursing students already have previous life experience in health and illness that have shaped their knowledge. This wealth of experience is largely untapped and ignored in nursing education today.

With the growing need for more nurses and the growth of the nontraditional nursing student population, educators need to understand the learning of nontraditional students to prepare them for life long learning in an ever changing health care environment. The life experience these students bring to their education needs to be explored as an avenue to support and enhance their learning.

Operational Definitions

For the purpose of this study, the following operational definitions will be used:

Nontraditional Nursing Students: a male or female who (a) is 25 years of age or older, (b) may or may not have some previous college or technical education, (c) may or may not have a degree in another field, (d) may or may not have previous health care work experience, (e) has entered an Associate Degree in Nursing program at a community college, and (f) has as a short-term goal a desire to acquire an Associate Degree in Nursing in order to practice nursing (Bueche, 1986).

Previous Healthcare or Illness Life Experience: any experience the student remembers regarding healthcare, hospitalization or illness. This includes acute or chronic medical, surgical, or mental health problems. The experience may have occurred with the student, a family member, friend, or acquaintance. A timetable for the experience is an important component of the experience. For example, it may be significant whether the student was 3 years old or 30 years old when an acute hospitalization for appendicitis occurred. The time frame may have an impact on the student's experience. If an experience of caring for a dying grandmother lasted 4 years or 4 months, the time aspect may have an impact on the student's experience.

CHAPTER II

LITERATURE REVIEW

Cognitive Developmental Theory

The review of Cognitive Theory literature will be explored starting with the foundation of Piaget's theory of the child's acquisition of thought (Piaget, 1959). Vygotsky's theory of knowledge acquisition and the *Zone of Proximal Development (ZPD)* builds on and then diverges from Piaget's theory. These two theories lead directly to the concept of Constructivism. The most current framework of constructivism is now expressed in terms of Social Constructivism. Finally, the work of Belinsky, Clinchy, Goldberger & Tarule, (1986) expands the traditional concepts of cognitive development in the adult learner.

Piaget's theory of cognitive development describes a series of four stages the child must progress through in a developmental format from infancy to adolescence. The Formal Operational stage of Piaget's theory is most closely related to learning in nontraditional age students. This stage is characterized by the ability to think logically and abstractly. Thought is more orderly, organized, and problem-solving focused. This stage of cognitive development would be required of nontraditional nursing students to process complex problems, prioritize patient needs, and test hypotheses.

Although Piaget's theory incorporated interaction with the environment for learning, he stops short of citing social interaction as a factor in cognitive change.

Cognitive change or growth occurs when current cognitive structures or schema are unable to reconcile conflict between previous understanding and current experience. Cognitive development is achieved through the processes of assimilation, accommodation, and disequilibrium. This leads to the acquisition of new knowledge in a stage of equilibrium. Assimilation is the interpretation of information in terms of existing cognitive structures or schemes. When new knowledge does not fit easily into existing structures, the learner experiences a sense of cognitive disequilibrium or mental confusion. This forces the learner to enter the phase of accommodation. This is where the learner establishes a new mental structure to understand the new knowledge. This cognitive restructuring leads to more and more sophisticated schemata or mental structures (Piaget, 1969).

Piaget's theory of cognitive development rests on the learner interacting with the environment and the resolution of mental conflict in developing cognitive structure. Both assimilation and accommodation are the result of a resolution of knowledge conflict.

Early in the learning process, the anticipation or expectation of knowledge conflict can be noted. Knowledge previously acquired can cause "anticipatory reactions at all higher cognitive levels, to the extent that [it is] one of the essential functions of knowing (Piaget, 1971, p. 191). In essence, expectations can set the stage for learning.

Vygotsky was a critic of Piaget's work and used it as a starting point for his own view of social interaction being critical in cognitive development. Piaget and Vygotsky had radically different views of the acquisition of new knowledge in educational settings. Piaget sees learning as occurring through a series of confrontations with the environment.

On the other hand, Vygotsky interprets dialogue and interaction as the source of knowledge acquisition. According to Vygotsky, concepts are not assimilated into cognitive structures but "undergo substantial development, which essentially depends on the existing level of a child's general ability to comprehend concepts" (Kozolin 1986, p. xxxiv). Vygotsky's study of concept formation in educational settings is termed *systematic organized learning.* He departs significantly from Piaget at this point by viewing the dialogical nature as essential to the acquisition of new knowledge. The process of concept formation in a child is achieved in cooperation and dialogue with an adult. Vygotsky coined the term Zone of Proximal Development (ZPD) to describe the place where a child's "rich but disorganized spontaneous concepts meet the systematicity and logic of adult reasoning" (Kozolin, 1986, p. xxxv). The result of this interaction is the acquisition of new knowledge for the child and the demonstration of the adult's use of logic and reasoning (Kozolin, 1986).

Constructivism is a view of learning that regards learners as active participants who construct their own understanding of the world. Learners use past experience and knowledge in the acquisition of new knowledge into existing cognitive structures. Constructivism emphasizes several critical elements in the acquisition of new knowledge. First, the learner links prior knowledge and experience with new knowledge. Second, the learner needs authentic situations for meaningful learning to occur (Cates 2001, p. 3). Finally, the constructivist theory of learning includes a social component which stems from Vygotsky's premise of social interaction. Learning is facilitated through social interaction, discussion, and problem solving (Rogoff, 1990). Brunner's concept of

scaffolding or cognitive apprenticeship is an extension of Vygotsky's Zone of Proximal

Development. Scaffolding is a described as:

> a process whereby the 'expert' (teacher) structures the conditions of learning a task in such a fashion that the 'novice' (learner) is progressively given less support as her or she gains in the capacity to complete it independently. (Rogoff, 1990, p.25)

Social Constructivism is used today in reference to progressive reform in

education. It links the theories of Dewey, Piaget, and Vygotsky with a post modern

socio-cultural tradition. Virginia Richardson (1997) describes social constructivism as

the position that "individuals create their own understandings, based upon the interaction

of what they already know and believe, and the phenomena or ideas with which they

come in contact" (p. 3). Social constructivism views social interaction as critical "in

both the construction and appropriation of knowledge" (Richardson, 1997, p. 7). This

implies a form of learning where students are engaged, find the process meaningful, and

can relate ideas to the real world and their life experience (Beck & Kosnik, 2006).

A general overview of Social Constructivism is characterized by four key

concepts. The first and possibly foremost concept, is that knowledge is constructed by

the learner. Dewey (1916) said, "Education is not an affair of 'telling' and being told, but

an active and constructive process" (p. 46). Acquisition of new knowledge must be

constructed on existing knowledge. "Learners must interpret new ideas in the context of

their present interests and understandings if they are to have thoughts at all" (Dewey,

1916, p.188). When students construct new knowledge, it ensures it will be useful to

them. Piaget noted that "learners construct ways to make sense of experiences and will

continue to use those constructions as long as they work" (Vadeboncoeur, 1977 p. 23). A

key element in the Social Constructivist paradigm is that the learner must have the time

to reflect and discuss how the new knowledge fits with their life experience and previous

knowledge acquisition in order to construct new cognitive structures.

The second element of Social Constructivism is that knowledge is experience

based. It can be developed by academic methods or a rich life experience. Learners must

bring their prior knowledge and experience to bear in interpreting general principles for

them to have meaning (Schon, 1983). As novice learners, students reinterpret existing

concepts and develop new ones based on their life experience of the world (Rorty, 1989).

This frames learning as being an ongoing process throughout life, since life experience is

a continuous process.

The third concept in Social Constructivism is that learning is social. The social

dialogue and Zone of Proximal Development of Vygotsky are classic examples of social

interaction fostering learning. Wells (1994) describes Vygotsky's social constructivism

in this way:

> As the learner appropriates the knowledge and procedures encountered in
> interaction with others, he or she transforms them, constructing his or her own
> personal version. But in the process, he or she is also transformed. (p. 8)

Finally, Social Constructivism views all aspects of the learner as connected. This

holistic view takes into consideration not just previous life experience and knowledge,

but attitudes, values, and emotions. The student's previous life experience is saturated

with all of these affective attributes which can affect learning. Knowledge ultimately has

meaning within a set of values or a way of life (Sternberg, 2003).

Intentional Conceptual Change

A current area of cognitive construction theory involves the process of conceptual change. Conceptual change pedagogy focuses on placing learners in situations that show points of conflict between old and new knowledge. This sets up a disequilibrium of thought that must be mediated by both cognitive and affective processes. These processes are under the learners' conscious and intentional control and can enhance or impede the learning process. Conceptual change theory considers the impact of these processes equally important as cognitive ability in the process of learning.

> Conceptual change depends, then, not only on cognitive factors such as the recognition of conflict, but on meta-cognitive, motivational and affective processes that can be brought under the learners' conscious control and may determine the likelihood of change. (Sinatra & Pintrich, 2003, p. 5)

The construct of intentional learning within conceptual change is used to describe the external and internal processes of learning where the initiation of change is placed in the learner's control (Bereoter & Scardamalia, 1989). For conceptual change to occur, the intentional learner must compare existing knowledge against new knowledge and weigh the similarities and differences. This is the first step in restructuring existing concepts to account for new information (Chi, 1992; Dole & Sinatra, 1998; Posner, Strike, Hewson, & Gertzog, 1982; Vosniadou, 1994).

With the comparison of current knowledge to new knowledge, the learner can develop a disequilibrium which can allow the learner to recognize the need for change. This leads the learner to develop a goal orientation to intentionally and consciously change current knowledge. This goal orientation is a positive and open attitude toward

learning. This process of conceptual intentional change requires a level of *high engagement* with the content and with the teacher to process the change (Pintrich, 2000).

The intentional cognitive change process uses the goal created by the dissatisfaction with current knowledge to initiate the conscious process of cognitive change. Once the goals and conscious desire for cognitive change is established, the process of self regulation of several factors under the learners control can impact the learning. Self regulation begins with self awareness of the learners' own meta-cognitive, motivational and affective processes. The meta-cognitive processes are developed through self awareness and reflection on past learning and experience. The motivational and affective processes include the learners' attitude and beliefs regarding the prior knowledge or experience.

> Learners have motives, goals and emotions that contribute to and even determine the learning outcome, Views of learning as a simple interaction of students' knowledge with the to-be-learned content are being replaced with perspectives depicting a complex interplay of learners' knowledge, intention and the environmental and social context. (Dole & Sinatra, 2003, p. 2)

Learners can have adequate cognitive and meta-cognitive self awareness, but motivational and affective factors can impede learning. Learners may have ideas, attitudes or beliefs about previous knowledge or experiences that they want to protect. This can result in cognitive resistance to learning which may have an emotional component of anger or fear. This factor of cognitive resistance can be strong enough to impede conceptual change independently of other factors (Sinatra & Pintrich, 2003; Limon Luque, 2002). The self regulation of meta-cognition, motivational, and affective processes can "account for learning and change even after differences in traditional

cognitive constructs, such as prior knowledge and reasoning ability, are taken into account" (Sinatra & Pintrich, 2003, p. 5). The theory of conceptual change clearly demonstrates the importance of affective, motivational, and meta-cognitive processes in cognitive restructuring.

Adult Cognitive Development

The area of adult cognitive development has been studied from many aspects including self regulated learning (Pintrich, 2000), multiple intelligence (Gardner, 1983), reflexive judgment (King & Kitchener, 1994), Women's Ways of Knowing (Belinsky et. al., 1986), and executive function (Gagne, 1965). Belinsky's theory will be examined here regarding adult cognitive development and learning in nontraditional age students.

Belinsky's 1986 Women's Ways of Knowing theory can be viewed as the female response to recent cognitive theorists who sought to minimize differences between the sexes. This qualitative study was specifically intended for use in academic settings with nontraditional age female students. The goal was to identify aspects of intelligence and thinking that may be more common and developed in women. Belinsky found that women tend to be process-oriented, intuitive, and personal in learning. With the acquisition of new knowledge, women tend to value discovery methods, being with others, support, responsibility, caring for others, inner control, and listening. The findings indicated that thinking could be divided into five categories of knowing. Silence is the first category where women see themselves as mindless, voiceless, and subject to external authority. The next four categories of knowledge acquisition (received, subjective, procedural, and constructed) include increasing levels of receiving and

creating knowledge independently. "The highest level of constructed knowledge acquisition is reached when women see all knowledge as contextual and individually constructed. "Women at this level value both their subjective and objective strategies of knowing" (Moseley, 2005, p. 218). For Women's Ways of Knowing, the life experiences of the learner are linked with the adult developmental level of Erikson as she learns to integrate new objective knowledge into a subjective context of life experience. The life experience of the student in Generactivity vs. Stagnation will be different than one in Intimacy vs. Isolation. Both students will be constructing new knowledge although starting from different frames of life experience reference (Belinsky et al., 1986). This demonstrates the need to investigate this phenomenon and determine what helps or hinders the acquisition of new knowledge.

This theory calls for women to experience *connected teaching* (Belinsky et al., 1986). This is characterized by a teacher valuing student's subjective thinking processes based on life experience and encouraging them to expand upon it. This supportive climate will allow a student to "expose their beliefs" (Moseley, 2005, p. 218) and life experiences to foster intellectual growth.

Adult Learning Theory

Adult Learning Theory or Andragogy is defined by Knowles (1980) as "the art and science of helping adults learn" (p. 43). Knowles theory is based on five broad assumptions about adult learners:

1. With maturation, an adult's self concept changes from a dependent personality toward one of self direction.

2. Adults accumulate life experience which becomes a rich resource for learning.

3. Adult readiness to learn is linked to current developmental tasks and social role.

4. Adults are more problem solving oriented than content centered in learning. This is due to a change in perspective from gaining knowledge for future application to gaining knowledge for immediate application in problem solving (Knowles, 1980)

5. Adults are internally motivated to learn (Knowles, 1984).

Adult Learning Theory can be viewed as complimenting the Constructivist theory of cognitive development in the study of the acquisition of new knowledge in nontraditional nursing students. In reviewing these theories of cognitive development, learning is seen as an active process which uses past experiences and knowledge through interaction and dialogue to build on or revise existing structures and acquire new knowledge. The nontraditional student possesses a rich life experience to foster the construction of new knowledge. Nontraditional nursing students have a wide range of life experience in health care involving family member, friends, or even themselves. This demonstrates the need to determine which factors of life experience foster or hinder acquisition of new knowledge in nontraditional female students.

Caring in Nursing

Jean Watson had a major curriculum impact in nursing education in the 1990's

with the advent of the Human Theory of Caring. Although the term nursing care had

been used for decades in nursing education, Watson developed a theory of caring to be

incorporated as a thread in nursing education curriculum.

> The process of human care for individuals, families and groups is a major focus
> for nursing not only because of the requirements of knowledge, commitment, and
> human values, and because of the personal, social, and moral engagement of the
> nurse in time and space. (Watson, 1988, pp 27-28)

Early research by Watson set up categories of caring which include treating the

patient as a person, concern, and empathy, and personalized characteristics of the nurse

(Watson, 1988, p. 34). These were further developed by Watson into a list of ten carative

factors. These factors include compassion, empathy, and sensitivity to oneself and others

as major components of caring (Watson, 1988). Watson recognizes the previous life

experiences of the nurse as a factor in the human caring interaction.

> Two persons (nurse and other) together with their unique life histories and
> phenomenal filed in a human care transaction comprise an event…[which is] an
> actual occasion of human care. (Watson, 1988, pp. 58-59)

Previous life experience and self knowledge is a major facet of Watson's theory

of caring. This includes "knowledge of one's power and transaction limitations"

(Watson, 1988, p. 29).   This self knowledge guides the nurse in the interpersonal practice

of human care. Human interaction is the cornerstone of caring which is initiated by

"identifying ourselves with others, whereby the humanity of one is reflected in the other"

(Watson, 1988, p 33). Identification of the nurse with the patient is a significant aspect of

human caring. Caring involves the ability to understand the lived reality of the patient.

The nurse uses this understanding to "help others grow in their own authentic fashions, or to attain a well-being of which they (the nurse) may have been deprived" (Noddings, 1984, p.14). This describes a personal benefit for the patient and nurse in the human caring event. This identification and understanding of a patient's experience lead the nurse to actively meet current and potential human needs.

Role Development Theory

Since the advent of role development theory in the early 1960s, many disciplines have applied its basic principles to understand role socialization, awareness, expectations, and conflict.

Role socialization is described as the assimilation of an individual into a group. This involves anticipation of role change and the resulting conflict between expectations and reality. This conflict or reality shock occurs as the individual enters the new role and encounters confusion and cognitive disequilibrium. To resolve this conflict, the individual attempts to adapt to the new role by establishing a personal identity and an understanding of the environment (Bradby, 1990). Personal supports assist with a role transition to explain and interpret new role feelings and behaviors. Successful role transition is impacted by changes in relationships. In this process of role change, self reflection is an important tool for the individual to create meaning by comparing past life events and relationships with current experiences (Green, 1974).

Positive previous life experiences tend to foster positive role expectations. Positive role expectations have been linked to more successful role adaptation in terms of behaviors, attitudes, and performance (Dinitz, 1966).

During role change, the individual undergoes an identity shift that is to be incorporated into the current self identity. The individual may have to unlearn behaviors early in the role learning trajectory to cope with the change (Strauss, 1966).

Conceptual Framework

The conceptual framework for this study is built on several significant areas of theory: Constructivism, Cognitive Development, Intentional Conceptual Change, Adult Learning, Human Caring, and Role Development.

Constructivism as a framework examines how new knowledge is built on existing cognitive structures. As these existing cognitive structures have been built on prior life experience, we must understand the life experience and how it relates to the acquisition of new knowledge.

Piaget's Cognitive Developmental Theory of accommodation and assimilation provides a foundation for this study. The role of cognitive dissonance and equilibrium in a learning situation can be used to understand the acquisition and integration of new knowledge. Constructivism and Social Constructivism provides the conceptual framework to understand how nontraditional nursing students construct or acquire new knowledge from an existing cognitive structure built on prior life experience.

Intentional conceptual change provides a framework to understand the process of cognitive structural change. Nontraditional nursing students bring knowledge in the form of previous life experience in healthcare to the nursing education experience. Factors that enhance or inhibit conceptual change can provide insight into strategies to assist students with shifting to new conceptual structures when needed.

Adult Learning theory supports the use of life experience to foster learning in nontraditional nursing students. These students demonstrate a readiness and a motivation to learn by virtue of their enrollment in a course of study. The self direction of adult learners focuses the learning on the student acquisition of knowledge rather than the teacher delivering knowledge.

Women's Ways of Knowing (Belinsky et. al., 1986) supports the use of a dialogue between student and teacher regarding the use of prior life experience to provide a deeper understanding and variable application of the knowledge in real life situations.

Jean Watson's Theory of Caring in Nursing encompasses the use of nontraditional students' previous life experience as a vital part of the human interaction of caring. The factors of empathy, compassion, self awareness, and identification with the patient's experience are key components of caring theory.

Nontraditional nursing students are in the process of a major role change in personal identity and career change. Role Development Theory incorporates the principles of role socialization, awareness, expectations, and conflict into a change in role.

These theories provide the conceptual framework for this research study from both a cognitive and affective perspective in the acquisition of knowledge in nontraditional nursing students with prior life experience.

Theoretical Approach and Rationale

Qualitative methods are appropriate to investigate the affective and experiential variables of previous life experience on the process of learning nursing skill and theory. Narrative Inquiry is the theoretical approach of this study. Narrative inquiry focuses on the ways that people "produce, represent and contextualize experience and personal knowledge through narratives" (Coffey & Atkinson, 1996, p. 56). The goal of Narrative Inquiry is to understand how individuals structure experience and make sense of the events in their lives. Narrative data provides first person accounts of personal experiences. Data is presented in stories in a holistic form. This approach allows the data to reveal how experiences are organized. Students will only remember experiences that are significant to them which also may provide data as to why the experience is significant enough to be remembered.

Assumptions of Natural Inquiry

People frame experiences in sequential events in structures as stories or narratives. This provides a context for interpretation. The story of experience is a "natural, obvious and authentic window into how people structure experience and construct meaning in their lives. The way people tell stories influences how they

perceive current events, remember past events and prepare for future events" (Schram 2006, p. 105). Narrative inquiry also assumes that the story of an experience can be real or imaginary, and not lose the power of its impact on the individual. The Natural Inquiry approach for this study will allow students to tell the story of their learning (Schram, 2006).

Research Question

How does previous life experience impact cognitive structure changes and knowledge acquisition of nursing theory and clinical skills in nontraditional nursing students?

CHAPTER III

METHODOLOGY

Research Design

This study was a mixed-methods research design using a qualitative core

component with a quantitative supplementary component. The theoretical drive of the

project was inductive and qualitative using journaling and interviews to collect data. The

primary role of the quantitative supplementary component was to enhance the description

of the participants' prior life experience through the use of a survey in phase one of the

study. Further quantitative data regarding test scores and final course grade was obtained

during phase two for descriptive data analysis and triangulation of the qualitative data

results.

Overview of the Research Design

This research study contained three phases and consisted of collecting qualitative

and quantitative data regarding the acquisition of knowledge by nontraditional nursing

students with prior life experience.

Phase One:

1. The entire research study and consent form was presented to the sample

population of seventy nontraditional nursing students. Students were asked to

volunteer for the research study.

2. Students were asked to complete a survey, developed by the researcher, to provide demographic data as well as educational and employment background. Agreeing to complete the survey served as consent to participate in phase one of the study. The survey asked students to list and describe any previous life experience with health care or illness. Life experience was operationally defined in the survey. Six examples were provided as an illustration. The surveys were collected when completed.

Phase Two:

1. Students completed a consent form to participate in phase two and phase three of the study.

2. During the 8 week term, students kept a journal provided by the researcher. Students wrote their thoughts and feelings after each clinical day. Students had two 8 hour clinical experiences per week.

3. There was no minimum or maximum amount of journaling requested per day. Failure to maintain the journal consistently did not exclude the student from continued participation in the study.

4. Journals were collected and reviewed on a weekly basis by the researcher and returned to the students by Monday of each week.

5. At the end of the 8 week term, the journals were collected. Final clinical evaluations of the student's performance were reviewed and copied for data analysis. All exam grades during the term and the final course grade were obtained. Based on this data, the researcher selected 10 students to interview.

These students were be chosen by the researcher to obtain the richest experience. Students were clearly instructed verbally and in the written consent, at the beginning of phase two that:

1. Only a small number of students would be asked to be interviewed.

2. Students may decline to be interviewed if selected

3. Students could participate in the study by journaling only

Phase Three:

1. The selected students were notified of the request for interview.

2. Clinical faculty members of the selected students were interviewed and audio taped to clarify and expand on the student's clinical evaluation.

3. The student were interviewed and audio taped at the end of phase three, after all the above data had been collected, to clarify and expand on their journaling, clinical evaluations, grades and learning during the term.

Sampling

A purposive convenience strategy of sampling methods was utilized to select participants for phase one and two of the study. In phase three of the study, a sampling for verification method was utilized. The connections made between the sample and the developing concepts in phase two, guided the researcher in the sampling of students selected to be interviewed in phase three. The students with the richest data set from phase one and phase two were the criterion for interview in phase three. The available sample population was seventy nontraditional nursing students enrolled in the second

term of a four term Associate Degree Nursing program in a south central Pennsylvania

community college. The students were enrolled in a course encompassing a Medical

/Surgical component and an Obstetric component. Students spent half of the term in the

Medical/Surgical theory class with an associated clinical experience in a local hospital.

Students spent the second half of the term in the Obstetric theory class with an associated

clinical experience in a local hospital. At the end of the term, each student had completed

a theory class and clinical experience in Medical/Surgical Nursing and Obstetric Nursing.

A total of ten students were selected for interview during phase three.

Data Analysis

Student interviews were conducted after all data was gathered from phase two.

Interviews were conducted in a retrospective format after the end of the course. Open

communication techniques were used by the investigator to encourage subjects to expand

or clarify their thoughts regarding the concepts which emerged from the phase two data.

Nonverbal communication demonstrated by the subject was noted in a field journal

during the interview and was correlated with the transcribed data. Member checking was

used by the investigator to clarify meanings within the data. Interviews were tape

recorded and transcribed for analysis. The interviews took place on the college campus

in a private office in the nursing department.

Demographic data collected in phase one includes frequency and types of

previous life experience. Phase one data was descriptively analyzed by frequency of

responses for demographic data. Frequency and type of prior health care life experience

were calculated for each general category and any common subcategories. The richness of the data provided a subtopic category of an individual student's personal previous life experience. Frequency within each type of prior healthcare life experience was noted and described. Analysis of transcribed interviews was coded as soon as transcripts were available. Journals were reviewed on a weekly basis by the researcher and read for emerging codes. Initial coding of the data was inductively generated using the grounded theory approach of Glaser (1965). All journals were reread specifically for emerging codes. Then, focused coding was carried out to organize the initial codes into broader themes (Strauss & Corbin, 1998). Faculty interview transcripts, clinical evaluations and quantitative descriptive data were reviewed to determine if they supported or refuted the codes developed from the journals. Individual grades, class average and a frequency distribution of grades were developed and compared with the codes.

The researcher discussed the data during each phase of the study with the dissertation director. An independent peer in nursing education acted as a coding checker during the data analysis process to maintain objectivity.

In phase three of data analysis, each interview transcript was reread with the objective of writing individual short interview summaries. These summaries allowed the researcher to identify threads which ran through the interviews and to maintain the context for the quotes.

Ethical Considerations

A written consent from the Director of the Nursing program at the community college specified was obtained to conduct the research (Appendix E).   This consent allowed specific access to student clinical evaluations, grades and approval for faculty and student participation.

Ethical considerations were important in this study to ensure privacy and confidentiality to the students. Pseudonyms were selected for all interviewed students and clinical faculty so that anonymity was assured in all recordings and transcribed field notes. With the distribution of the journals, students wrote a personal identification number on the journal. Only the researcher had the list of the participant's names and personal identification numbers. All participants were assured of total confidentiality and anonymity in the collection and storage of data as well as in any future presentation of findings.

Validity

The validity of this qualitative study was ensured through the use of multiple strategies. These strategies were developed from the research of Guba and Lincoln (1982, 1989), Goetz and LeCompte (1984) and McMillan and James (1992).

Triangulation was a major source of rigor in this study. Several types of triangulation are incorporated into this study.

Data Source Triangulation is the use of multiple data sources. Data in this study came from the surveys, journaling, clinical evaluations, exam and final course grades as well as faculty and student interviews.

Methods Triangulation involves the use of multiple research methodologies. As a mixed-methods research design, both quantitative and qualitative data was gathered. The quantitative data from the survey in phase one, exam grades and course grades were incorporated into the data analysis. The qualitative data came from journaling and first person interviews with faculty and students.

Theory Triangulation is the use of multiple theoretical perspectives to add insights to the data analysis. Cognitive developmental theory, Social Constructivism, Adult Learning theory, Role theory and Intentional Conceptual Change theory provided several different ways to interpret the data.

Neutrality was ensured by the use of two expert content readers of the data to insure consistency in the interpretation of the data. Prolonged and persistent engagement was accomplished as the research was conducted during the entire 8 week course. An expert nurse educator was utilized for peer debriefing after each phase of the study. This provided feedback on the data in order to maintain the objectivity of the researcher. Member checking was utilized during and after the faculty and student interviews to ensure the accuracy of the meaning of the data to the subject. Since every subject brings an individual life experience to the study, each subject's data set is slightly different. During the coding in phase two and phase three, these data sets were evaluated for

common underlying and emerging meanings. This is an example of the use of structured relationships to support validity.

Limitations of the Study

Limitations of this study were related to the small sample size, the defined parameters of life experience and the limitations of the natural inquiry approach.

The initial available sample was seventy nontraditional nursing students in this community college during the second term of a four term nursing program. More subjects could have been obtained if additional samples were taken from students in other community college programs. Another limitation is the collection of data a one point in time during the curriculum. A longitudinal approach to data collection could have provided information on how the data changed over time with the same set of students. Data from students in the same program but at different points in the curriculum could have further strengthened the findings.

Although provided with a definition of previous health care life experience, the student may have only remembered a proportion of experiences and documented an even smaller portion as data. This limitation is related to the use of any human subject ask to recall events. Also, the amount of previous life experience was expressed as a subjective perception by the student.

Although confidentiality will be emphasized to the student, certain experiences, thoughts or feelings may be withheld by the student in journaling and interviews. This possibly limited the data gathered for accurate interpretation.

Traditional generalizabilty is a limitation in any qualitative research due to the individual experience of each subject. Donmoyer (1990) theorizes that generalizabilty can be more broadly defined. "During the analysis of data, developing themes and concepts based on the conceptual framework can be utilized to organize and conceptualize the data" (p. 197). This can lend credibility to the application of the findings to other populations.

<center>Timetable</center>

October 17, 2007:

    Met with students to explain research project and obtain signed consent forms.

    Students completed surveys

    Distributed journals and noted personal identification numbers for each student.

    Students began to journal after each clinical experience.

    Journals reviewed for emerging themes and initial coding.

Week of October 22, 2007:

    Students continued journaling

    Journals reviewed for emerging themes and initial coding.

Week of October 29, 2007:

    Students continued journaling.

    Journals reviewed for emerging themes and initial coding.

Week of November 5, 2007:

    Students continued journaling.

    Journals reviewed for emerging themes and initial coding.

Obtained students' mid term exam grades

Week of November 12, 2007:

Students continued journaling.

Journals reviewed for emerging themes and initial coding.

Week of November 19, 2007:

Students continued journaling.

Journals reviewed for emerging themes and initial coding.

Week of November 26, 2007:

Students continued journaling.

Journals reviewed for emerging themes and initial coding.

Week of December 3, 2007:

Students completed journaling after the last day of clinical.

Journals collected.

Course final exam

Students selected for phase 3 interviews and notified.

Clinical faculty of phase 3 students interviewed.

Week of December 10, 2007:

Student interviews conducted

CHAPTER IV

RESULTS

Introduction

This chapter begins with a review of the aim of the study followed by a

description of the process of coding and development of the qualitative themes. The data

results of this study are reported in two sections: quantitative findings and qualitative

results. The quantitative findings present data related to demographic characteristics,

frequency of different types of past life experience and results of the course grade

analysis and previous life experience. The qualitative section describes the qualitative

results of interviews with ten nontraditional students and eight nursing faculty. Themes

and sub-themes will be detailed with specific scenarios presented to illustrate the

concepts.

Aim of the Study.

The aim of this study was to explore the effect of previous life experience on

cognitive structure changes and knowledge acquisition in nontraditional age nursing

students. A mixed-methods research design was used with a qualitative core component

and a quantitative supplementary component. Using a narrative inquiry approach, the

qualitative data was obtained through personal interviews and journaling. The

quantitative data was obtained through survey responses and academic scores.

The initial convenience sample was available from a second term class of 70 nontraditional nursing students in an associate degree nursing program in the northeastern United States. In phase one of the study, the initial sample of 54 participants agreed to complete a survey to obtain demographic information and a description of their previous healthcare life experience. During phase two of the study, 24 participants consented to journal their feelings regarding their learning after each clinical experience during the eight week term. By the end of phase two, 18 students had submitted one or more journal entries. The journal entries were coded each week as they were submitted. These codes were grouped into several categories which guided the personal interviews conducted in phase three. At the end of the term, 10 students who had submitted journal entries agreed to be interviewed for phase three of the study. Once the 10 students to be interviewed were identified, the associated classroom theory and clinical faculty members were interviewed. Clinical faculty members provided information regarding performance, attitude and insights into clinical learning. Classroom theory faculty members provided course grades, insights into student ability to learn theory content and attitude in class. Two faculty members agreed to be audio-taped and six faculty member interviews were documented by field journal notes that included direct quotes. Several faculty members had more than one student participating in phase three. Consequently, only 8 faculty members were interviewed to obtain data on the 10 participants; 2 classroom theory and 6 clinical faculty members. Faculty members were interviewed using the codes and general categories identified in the journaling. Several critical patient scenarios identified by individual students during journaling were discussed from the faculty's point of view.

This triangulation of the data provided deep and significant insights into the students' experience. In one situation, a clinical faculty member was re-interviewed after a student interview for clarification. In the final aspect of phase three of the study, 10 students were interviewed and audio-taped regarding the codes and categories identified from the journal entries. Students were asked specifically about the effect of their previous life experience on theory and clinical learning. Specific patient scenarios, learning situations or feelings associated with an individual student's journal entries were discussed for clarification, elaboration or change.

Quantitative Results

Demographic Data

The available population of nontraditional nursing students in the second term of the four term Associate Degree program was 70. A sample of 54 female students volunteered to participate in phase one of the study by completing the survey. The survey requested demographic information, prior job experience and previous life experience in healthcare. The mean age of the sample was 33.7 years with a standard deviation of 9.467.

Regarding marital status, 20 students described themselves as "married" and 15 as "single never married." These findings are located in Table 1. The number of children reported per student ranged between one and four with 2 children being the most frequent response of 17 students. Seven students reported having one child, twelve students reported three children and seven students reported four children.

Technical training or certification was reported by 35 of the 54 participants. A high school diploma was the highest reported level of education by 14 of the 54 participants. These findings are presented in Table 2.

Table 1

Frequency of Marital Status $N = 54$

Marital Status	Frequency
Single, Never Married	15
Single, Living with Significant Other	5
Married	20
Divorced	9
Separated	4
Widowed	1

Table 2

Frequency of Levels of Education $N = 54$

Level of Education	Frequency
Bachelor's Degree	2
Associate's Degree	3
Technical Training/Certification	35
High School Diploma	14

Prior healthcare work experience was reported by 35 of the 54 participants, while 19 reported no previous health care work experience. Certified Nurses Aide (CNA) was the most frequently reported health care work experience by 16 participants. The remaining 19 participants described a wide variety of other healthcare work experiences. All types of prior healthcare work experience are listed in Table 3.

Table 3

Types of Prior Healthcare Work Experience

Licensed Practical Nurse (LPN)

Medical Assistant

Medical Secretary/Unit Clerk

Paramedic

Dialysis Technician

EKG Technician

Drug and Alcohol Counselor

Mental Retardation Caseworker

Pharmacy Technician

In the analysis of all prior work experience, 35 out of 54 students reported having one or more non-healthcare jobs before taking a healthcare job. A broad range of non-healthcare work experience was reported in business, service, manufacturing and

management. The specific types of non-healthcare related work experience are listed in

Table 4.

Table 4

Types of Previous Non-Healthcare Work Experience

Waitress

Bartender

Factory Worker (Unskilled)

Cashier

Retail Store Clerk

Real Estate Agent

Bookkeeper/Accountant

Homemaker

Childcare Worker

Paralegal

Drug and Alcohol Therapist

Cook

Secretary/Administrative Assistant

Previous Healthcare Life Experience

The survey findings for previous healthcare life experience were broken down

into 13 areas. Twelve Medical/Surgical areas and 1 Obstetric/Gynecological area were

identified in the survey as previous life experiences. The 54 participants listed of

previous healthcare life experiences and rated the amount of experience on a scale from

zero (none) to three (large) within each of the 13 areas. This rating by the participants

was a subjective expression based upon their own perceptions. Table 5 presents the

amount of each of the 13 areas of healthcare life experience and the frequency of the

amount of that experience. In the areas of Death and Cancer, 100% of the students listed

some amount of experience. In addition, 70% or more of the participants reported

experience in the following areas: Cardiac, Neurological, Mental Health/Psychiatric,

Surgery, Obstetric/Gynecology and Emergency Room.

The participants also listed their own personal healthcare experiences. The

Obstetric/Gynecology data showed a detailed combination of personal life experience

and/or experience with other women. Personal life experience consisted of pregnancy,

miscarriage, infertility treatment and cervical cancer. Experience with other women

included attending a birth, going to a prenatal visit with a friend or relative and/or

supporting a friend or relative during or after pregnancy.

The majority of students reported having some amount of personal

Obstetric/Gynecology experience, while 12 had no personal experience. Of the 42

students who reported a pregnancy history, 34 had one or more children, while eight

students reported experiencing one or more miscarriages. Of these eight students with a

personal history of miscarriage, three had no further pregnancy history while five

subsequently had one or more children. Infertility was also reported in small numbers.

Table 5

Areas and Percentage of Previous Healthcare Life Experience   *N* = 54

Areas of Prior Life Experience	None (0)	Small (1)	Moderate (2)	Large (3)
Death	0%	15%	37%	48%
Cancer	0%	46%	24%	30%
Musculoskeletal/Orthopedic	31%	43%	13%	13%
Cardiovascular	19%	46%	11%	24%
Respiratory	41%	4%	28%	28%
Gastrointestinal	41%	19%	32%	9%
Endocrine/Metabolic	41%	37%	19%	4%
Renal/Urinary	43%	37%	20%	0%
Neurological	24%	28%	41%	7%
Mental Health/Psychiatric	24%	24%	28%	24%
Trauma	37%	41%	4%	18%
Surgery	22%	37%	33%	7%
Emergency Room	2%	24%	37%	37%
Obstetrics/Gynecology	22%	13%	28%	37%

In the 12 Medical/Surgical areas, students listed a broad range of personal life experience. The frequencies of personal experiences are reported in Table 6 found in Appendix A.

Students described their personal previous healthcare experiences and gave specific examples. Table 7 lists the specific personal previous healthcare experiences within each area and can be found in Appendix A.

Quantitative Analysis of Course Grades and Previous Healthcare Life Experience

In phase two of the study, 20 participating students allowed the researcher access to course grades. During the semester when the study was conducted, the participants were taking a nursing classroom theory and clinical course comprised of a Medical/Surgical component and a Maternity component. Theory grades for each component of the course were calculated from exams, quizzes and written assignments. A total Medical/Surgical experience score was calculated for each student by adding the self reported ratings of zero to three for each of the 12 areas. This gave each student a total Medical/Surgical experience score.

The Medical/Surgical experience scores ranged from a low of 6 to a high of 36. These scores clustered into low and high experience groups with a clear separation between the scores 18 and 21. A group of 10 students with scores between 6 and 18 were described as having low Medical/Surgical experience, while 10 students with a score of 21 to 36 were described as having high Medical/Surgical experience.

The Obstetric/Gynecology experience score, reported subjectively by each student, was a single number between zero and three. Although the mean Obstetric/Gynecology experience group score was 1.93, the actual life experience was a more accurate reflection of the data when determining low and high groups. Scores of two or three were identified as high Obstetric/Gynecology, while scores of zero or one represented low experience. An uneven distribution of students between high and low groups was accepted because the division of life experience was very clear. It was noted that all the subjects in the low experience group had no personal experience with pregnancy, miscarriage or infertility. These subjects described their experience as either none or having attended a birth or had a relationship with a pregnant woman. All subjects who were in the high experience group had one or more pregnancies in addition to either miscarriage or infertility treatment. This data clustering yielded 13 students with high experience and 7 students with low experience.

The means and standard deviations were calculated for both the low and high Medical/Surgical experience groups. The mean of the low Medical/Surgical experience group was 13.8 with a standard deviation of 3.553. The mean of the high Medical/Surgical experience group was 25.2 with a standard deviation of 3.994. An independent t test was run between the low and high experience groups to determine if a significant difference in the amount of experience existed between the groups. The analysis found a significant difference between these groups at $p < 0.05$ level ($t = -6.744$, 18 df). Similar standard deviation scores were noted between these two groups.

In the same manner, the mean and standard deviation was calculated for both the low and high Obstetric/Gynecology experience groups. The mean of the low previous life experience groups was 1.20 with a standard deviation of 1.135. The mean of the high experience group was 2.10 with a standard deviation of 0.994. An independent t test was run between the low and high Obstetric/Gynecology experience groups to determine if a significant difference in the amount of experience existed between the groups. The analysis found a significant difference between these groups at $p < 0.05$ level ($t = -8.949$, 18 df). Similar standard deviation scores were noted between these two groups. This finding demonstrates that even within a group of nontraditional nursing students, significant differences may exist regarding their amount of experience. This describes nontraditional students as a heterogeneous group in the area of previous life experience.

Pearson correlations were run between individual student's experience scores and their associated course grade. The correlation between Medical/Surgical experience score and the associated course grade was 0.281 at the $p < 0.23$ level. The correlation between Obstetric/Gynecology experience score and the associated course grade was 0.14 at a $p < 0.55$ level. This analysis found no correlation between the amount of previous life experience and course grade for either the Medical/Surgical or Maternity components.

An additional Pearson correlation was run to determine if the total amount of experience was related to either component course grade. The total amount of experience score was the sum of the Medical/Surgical and the Obstetric/Gynecology scores. In

comparing the total amount of experience score with the Medical/Surgical grade, a correlation of 0.31 at the $p < 0.18$ level. In the same manner, a correlation of 0.11 at the $p < 0.64$ level was found between total experience score and the Obstetric/Gynecology course grade.

These correlation findings are very weak with the sample size of 20 participants. It may be important to note that total experience score had the highest correlation with the Medical/Surgical course grades. Larger sample sizes may yield stronger correlations if a relationship truly does exist between the amount of experience and course grades in nontraditional students.

A Pearson correlation was run between individual student's Medical/Surgical theory course grade and Obstetric/Gynecology theory course grade. This was done to determine is a correlation existed between the course grades. A moderate positive correlation of 0.579 at the $p < 0.01$ level was found between Obstetric/Gynecology grades and Medical/Surgical grades without regard to amount of previous life experience.

Due to the small sample size used, these results may contain bias and not provide enough statistical power to determine if true differences exist. Future research on these variables with a larger sample size is needed to establish statistical reliability.

Qualitative Findings

Introduction

The qualitative findings of this study were analyzed using Glaser's grounded theory approach (1965). Journals were read and reread for emerging codes. These codes

were organized into broader themes at increasing levels of abstraction (Strauss & Corbin, 1998). At the end of the course, individual faculty and student interviews were conducted. Faculty interview transcripts, notes, and performance evaluations were reviewed to determine if these themes could be supported or refuted by triangulation of the data. Student interviews were audio taped after the end of the course. Students were interviewed to clarify or expand on the themes developed from the journaling in phase two of the study. On one occasion, it was necessary to re-interview one faculty member after the student was interviewed to clarify a student's perception of an event. Student interview transcripts were reviewed for common themes.

Organization of Data

During the early stages of coding, the data appeared to fall within two distinct areas of conflict: changes in relationships and changes in learning. A portion of cognitive conflict experienced by the students was resolved through various methods described in the qualitative findings. Piaget's principles of accommodation and assimilation were frequently utilized to integrated new knowledge into existing cognitive structures. Students clearly demonstrated disequilibrium upon encountering new knowledge that conflicted with previous knowledge. This data revolved around changes in learning.

The other area of conflict found in the data contained both cognitive and affective components. The combination of knowledge conflict and affective conflict of feelings and behavior were identified as cognitive dissonance. Students struggled with integrating knowledge with conflicting feelings and appropriate behavior. This data was found to

revolve around a change in relationships. This conflict is at the core of role transition

theory. The factors within role transition conflict were multifaceted and covered

affective areas related to caring, attitudes, emotions, behavior as well as knowledge

change.

      The resolution of knowledge conflict was noted as disequilibrium within the

learning process and as cognitive dissonance in the role transition process. This led the

data to be divided into two types of change: relationships and learning.

      The data involving changes in relationships were identified as an important aspect

of role transition theory. The process of role transition incorporates "adoption of the

values and perspectives of the … group" which results in voluntary and involuntary

changes in personal relationships (Turner, 1966, p. 155). These changes in personal

relationships were identified in the data between the student and peers, faculty, patients,

staff nurses and even within themselves. These interpersonal and intrapersonal changes

were identified as students adapted to the affective and cognitive demands related to the

role of student nurse. The data coded around the concept of changes in relationships was

gathered under a broad major theme of role transition.   This theme was found to be

multidimensional as the student experienced cognitive dissonance within these

relationship changes. Sub-themes were identified based on the focus of each type of

relationship.

      The concept of caring involved the way students related to patients and their

families in light of their previous life experience. A concept of expectations

encompassed changes in relationships with peers, faculty and within themselves.

Conflict was initially viewed as a global concept, but then was further delineated into emotional conflict and knowledge conflict. This further clarified the differences in the data between changes in relationships as emotional conflict and changes in learning as knowledge conflict. A concept of personal transformation included intrapersonal changes related to attitude and understanding of their experiences. Changes specific to the student relationship with faculty were described under the concept of faculty role. Gathering all these concepts together demonstrated a clear commonality of data involving role transformation within a broad range of personal and professional arenas. These concepts were identified as components of the broad theme: *Dimensions of Role Transition.*

The second portion of the data revolved around the concept of changes in learning and factors affecting learning during periods of disequilibrium. Within the data, Piaget's process of accommodation and assimilation was noted in the learning process. With the addition of knowledge from previous experience, Intentional Cognitive Change theory described the learning process with nontraditional nursing students on a deeper level. This theory describes the process of knowledge conflict and its critical role in acquiring new knowledge or changing existing cognitive structures. Self awareness of meta-cognition, motivation and goal orientation are critical components of learning and changes in current learning within the structure of Cognitive Change theory. Data describing conflicts in learning or changing current knowledge were identified as knowledge conflict. Data which demonstrated an evolving self awareness of cognition and the affective aspects of learning were identified as self awareness. These two concepts are an integral part of Intentional Cognitive Change Theory where the process

of knowledge conflict and self awareness drive the successful process of learning and changing existing knowledge. The theme of *Cognitive Restructuring* was developed from these two concepts.

<div align="center">

Development of Themes

</div>

Transcripts of the interviews yielded common responses. These responses were initially divided into specific codes. Upon further analysis, these codes were organized into two distinct concepts: one which dealt with personal student role adaptation and the other related to learning issues.   These two concepts were refined into two broad themes: Dimensions of Role Transition and Cognitive Restructuring. These two broad themes are composed of sub-themes developed from the data codes. The Dimensions of Role Transition theme was found to be multidimensional. These dimensions were clearly delineated into following sub-themes: *Caring, Expectations, Emotional Conflict, Personal Transformation* and *Faculty Role*. The theme of Cognitive Restructuring was drawn from the theory of Intentional Cognitive Change with sub-themes of *Knowledge Conflict* and *Self Awareness*.

Initially, a broad code of Conflict was identified within the data. This code had a wide range of data encompassing personal, academic and professional concerns. Upon further analysis, the data was divided into emotional and cognitive types of conflict. It was determined that the emotional conflict data was more closely related to the role transition theme, while the cognitive conflict data was a strong component of the cognitive restructuring process described by Intentional Cognitive Change theory.

Emotional conflict was such a pervasive experience for nontraditional students that several mediating factors for resolution were identified. These factors of proximity, intensity and use of supports were found to impact the emotional conflict either positively by resolution or negatively by some level of unresolved conflict.

Expectations were found to encompass expectations of self, expectations by peers, and perceived expectations by faculty. It was anticipated that expectations by peers may be self imposed by the student. It was interesting to note that specific examples were identified of overt verbal expectations made by peers as well as those self imposed by the student. Triangulation of the data with faculty interviews provided for a clear interpretation of student misperceptions of faculty expectations.

The Role of the Faculty concept permeated most of the sub-themes. This data was integrated within each sub-theme as applicable in the analysis and discussion of the sub-theme. Several key concepts were identified within the faculty interview data alone and were triangulated with student interviews. These findings were viewed to be strong enough to stand alone as a separate sub-theme.

The Personal Transformation sub-theme was developed from data codes which described how the interaction of previous experience and learning affected students. Initially, this data was coded as Role Transition, but on further examination, the findings painted a more holistic view of change within the student. Personal transformation was found to encompass elements of professional role transition as well as positive personal growth in maturity and perspective.

Within the Cognitive Restructuring theme, data was coded into knowledge conflict and self awareness. Knowledge Conflict was separated from Emotional Conflict during the early phases of the analysis. Based on Intentional Conceptual Change theory, data was identified that described the critical theory components of motivation, goal orientation and meta-cognitive awareness. This data was organized under the sub-theme of Self Awareness.

After analysis of the qualitative data, two major themes and seven sub themes emerged from the data. The first theme of Dimensions of Role Transition was further divided into the sub themes of Caring, Expectations, Emotional Conflict, Personal Transformation and Faculty Role. The second theme of Cognitive Restructuring had two sub themes of Knowledge Conflict and Self Awareness.

Dimensions of Role Transition

Caring

Caring was a significant sub theme found throughout the data. Students all cited the ability to identify with the patient or the family as a factor in their feelings of care, empathy and compassion. Watson's Theory of Human Caring includes the importance of the nurse being able to identify with the patient as a means of facilitating a human caring interaction (1988). Students were able to describe identifying with feelings of fear and helplessness experienced by the patient and family. Students described these feelings of care and compassion as having a positive impact on the care and teaching given to the patient and family. Caring involves the ability to grasp the lived reality of another and see

oneself in the situation. Viewed another way, an individual experiences a desire for action to meet the needs of others (Greene, 1990). The following scenarios demonstrate how students used the experience of caring as the impetus to provide patient care and teaching.

This student's response is an example of how feelings of caring and identification with the patient resulted in appropriate patient teaching and emotional support. This student had a large amount of experience with the death of friends and relatives including the murder of a sibling four years earlier. She became involved with a grief support group and now functions in a leadership role. In the last two years, she has spoken at several grief conferences across the country. In this situation the student was caring for an elderly woman who was to be discharged that day.

> Student: I said to her, 'I know you are going home today. Are they going to throw you a party …when you get home" and she … [said] 'no'. I had a dark feeling. I sat down on the bed and I said 'Is there anything that you want to talk to me about, do you need to talk? She just started to cry. She said, 'You asked me if I had any children and I said no'. Then she said, 'My only daughter was murdered earlier this year.' We just sat there and I held her hand. We cried a little bit together. I just let her talk. I talked a little about my experience [with my sibling]. I told her that your daughter will always be with you and you don't have to tell people you don't have children. You can say 'I have a daughter and she passed away.' She (patient) became emotional and said 'thank you'. It was like I gave her permission that no one had given to her. She hugged me and thanked me up and down and said 'You have no idea what you have done for me'. Of course I go back trying to fight the tears and it felt wonderful.

> Another student described her ability to empathize with patients this way:

> Student: I have the ability to empathize a little bit more with patients or at the very least with their families which is, I think, very important in trying to provide patient care. You need to understand their needs so if you had similar needs in the past, you can pick up on one of those cues. I think it's an advantage to be able to empathize with the other person. I think they're more willing to open up to you

if you, not that you want to go into details about your personal life, but if you can at least show that you understand.

Student feelings of empathy and compassion can be a motivating factor in providing good patient care. Several students described scenarios where they essentially asked themselves, "How did I want to be treated when I was in this situation?"

An example of one of these scenarios comes from a student journal entry.

Student: Today, I assisted a laboring Mom with her first delivery. It brought back memories of my own labor. I was able to help her with comfort measures that helped me, such as sucking on ice pops, [and] back rubs for back labor. These measures were not implemented by the primary nurse in this situation. It was of an advantage to the patient to have a [student] nurse caring for her that recently experienced the same pain/discomforts of labor. Upon delivery, I was able to reassure the dad when I placed the oxygen mask on [the mom] that it was a normal precaution. My husband panicked when they administered oxygen to me while pushing.

Being able to identify with the patient can provide the student an opportunity to provide effective teaching. The following student described a personal surgical experience in which she did not understand why she was encouraged to walk postoperatively.

Student: Whenever I had my gall bladder surgery and they were walking me or they were doing certain things, I just thought is was because they wanted me to get up and walk and get out of the hospital and get home. That's what I thought. I didn't know about things like blood clots, circulation, and pneumonia. It made me feel empathy towards the patient because I know exactly what they were going through as far as the pain and being uncomfortable and supporting the area like putting a blanket on the area before you get up. [I had] … more patience taking care of the patient because of the surgery and pain and what I experienced myself.

Nontraditional nursing students expressed feelings of compassion, caring and empathy by identifying with the patient or family. This resulted in motivation and knowledge to provide good patient care and appropriate teaching.

Expectations

A common theme throughout the data was student expectations and the impact on their learning and clinical performance. Reality shock was expressed by students upon entering the clinical experience. Bradby (1990) describes role reality shock as a conflict between expectations and reality which causes an affective and cognitive disequilibrium. Resolution of this conflict entails the establishment of a personal identity and understanding the environment. The following is a journal entry after a student's first day in a Maternity clinical experience.

> Student: Today was not what I expected. I had this idea that I would be helping happy families with their new 'bundle of joy'. My patient was 37 years old, just married because of the baby, to her 40 year old boyfriend. She was depressed and a little slow mentally. Social services had been called because of the unstable home situation. I know that life is not always as 'rosey' as we would like it to be, but this made it feel more real to me.

This concept was followed up during the interview portion of the study with this student. By the end of the term, it appears this student had a little different perspective on her reality shock by experiencing equilibrium of affective and cognitive processes.

> Student: It was an ongoing joke that I kept getting all of the abnormal patients. They were all in room three, so we had an issue with room three. But, it was a good learning experience with all of them.

> Investigator: Sounds like you had a little bit of a reality shock went you started in Maternity.

> Student: Right, [but] I wouldn't really use the term 'reality shock'. It was just kind of re-adjusting my idea of what 'normal' really is in clinical.

Reality shock was also seen involving the execution of clinical skills as well as the behavior of other nurses. The following is a journal excerpt from a student who was also a Licensed Practical Nurse (LPN) during a Medical/Surgical clinical experience.

Student: The other day, I was stunned to see 5 nurses [and] myself in my patient's room trying to start an IV. Not one of the 5 had gloves on. After 3 sticks (attempts to insert), they finally got the IV to start and blood was everywhere! It was on their hands, their uniforms, the bed, the patient's arm, and all over her gown. It stunned me to watch experienced nurses do this without gloves. It sickened me to know that these are people that have been working in this field for who-knows-how-long and they are not even taking the time to protect themselves. They told me that [they] didn't put gloves on because the lady was Amish and 'they don't have anything' (diseases).

Another aspect of expectation was the universal attitude of the students that their life experience was an advantage to them in their nursing education. In areas where students had life experience, they expressed feelings of being comfortable and familiar in that clinical area. Students cited their maturity, self confidence, goal orientation and communication skills as a significant advantage of mature adult development.

Student: I do not tend to worry as much as a lot of my classmates, especially the younger ones, about the day to day grades and all of that. Simply because I think I'm more aware of the big picture, just because of everything I've been through.

Another student commented on the advantage of being a mother and having the experience of separating emotions from what needs to be done in a situation.

Student: I just focused on patient care, trying not to let my emotions get in the way. That's what we have to do in daily life with kids. You just got to do what you got to do. Your son falls and is bleeding everywhere. You don't [say] 'Oh my gosh, you're bleeding!' You just get in that zone. You're in the mom zone. I think when you're a nurse, you are in the nurse zone.

Several students cited examples where they felt their past life experience was a disadvantage. One student felt she was at a disadvantage when she was not assigned a Maternity patient during the first two clinical days. Her perception was that the instructor did not give her a patient because she had four children.

Student: I felt like I was getting shortchanged in my experiences. [I felt] I was put at a different standard than my peers. I felt like I was at an unfair

disadvantage because the teacher wanted everybody else to have the experience of a birthing mom. I felt as though she put me in a [different] category. 'Well, you already had kids so you may not need as much experience as that.' (mimicking the teacher). That's what I thought [at the time].

Investigator: Did you bring this up to the teacher?

Student: No, I didn't want to say anything.

When this faculty member was interviewed, she recalled the fact that the number

of patients available for students was very low the first two clinical days. Some students

were assigned to observations and others to assist other students. The faculty member

was surprised that the student had this perception.

Faculty: I had no idea how many children she (the student) had. The situation was purely a lack of available patients. I would never limit a students' clinical experience because of her pregnancy history.

Later, the same student relayed a similar situation, but with a more positive outcome.

Student: She (the teacher) called everybody to see the placenta while I was busy getting linens and stuff. It was a learning opportunity, but she didn't really include me in on that. I assumed that it was because I've already seen a placenta.

Investigator: How did that make you feel?

Student: I was a little disappointed. But then when I was in the birthing room with my very first patient who was having a delivery, she [the teacher] came in and [went] over the different parts [of the placenta] with me. So I did end up getting the learning experience.

Investigator: So, you didn't feel like you were short changed when it was your turn?

Student: Initially, I felt like I got short changed. But when it was my turn, then it was okay.

Expectation was seen in both academic and clinical areas of the course. Regarding academic expectations, some students admitting feeling 'cocky' starting the Maternity course. One student put it this way:

> Student: I figured, 'How hard can it be? I've had 3 kids.' I thought I knew more than most people when it came to pregnancies and child birth because I sat and read so much when I was pregnant. But still, now that I look back on it, there was still a lot that I didn't know. Like after delivery, I had no idea about things like Apgar scores and fluids and problems with bleeding too much.

At some point during the course, all the students in this study came to the realization that "There's a lot more to this than I thought". Interestingly enough, no student described these feeling as overwhelming, frustrating or depressing. All students described the fact that realizing there is so much more to know, actually motivated them to learn. The following student had several surgical procedures in her life.

> Student: When I'm in clinical and see something similar to what I had done, I am fascinated to see it and read the patient's chart.

> Investigator: Is it upsetting or overwhelming to you?

> Student: Oh no, it makes me want to learn more about it. I don't want to minimize what's the right way to do things. I might know what it feels like to be a patient, but I want to know what it's like to walk around on the other side as a nurse.

Expectations by students fell into three categories: expectations of self, expectations by peers, and perceived faculty expectations. Many students described feeling as though they should be doing better in class academically, if they had previous experience with a particular topic. Ultimately when questioned, students acknowledged that they realized this was an unrealistic expectation for themselves. One student describes her feelings this way:

Student: I was a Medical Assistant. We dealt a lot with hypertension and things like that. I feel like I should know those meds even though there's like a billion of them. I feel like I should know them because we had so many patients that had hypertension. I feel like I should know them all, but obviously I don't.

Investigator: If on a test you miss some questions on hypertension, how do you feel?

Student: I guess negative. I kind of beat myself up over it.

Investigator: Is that something that stays with you?

Student: No, I can let it go. I mean, I can't know every single med.

Expectations from peers were described frequently by nontraditional age students.

This was not found to be only a perception by the student, but actually verbalized by

peers in class and clinical.

Student: When we were in clinical sometimes, other students would come to me instead of the teacher to ask questions.

Investigator: Did they ask you things you didn't know?

Student: Yeah, they did. [But] I would say 'Oh, I don't remember' or 'I just don't know.' Anything that I told them, I would say 'Well, this is from my own experience. If it's textbook learning, you need to refer to your textbook.' But I would talk about my experiences because that's what they would mostly ask me about.

Another student was in a severe motor vehicle accident and had fourteen

surgeries. She described expectations from peers as a way for her to help them.

Student: The girls in class always giggle because they look at me when they are teaching something and ask me if I had that. They sometimes ask me questions about it. So you know, it helps [having had the experience]. I can explain about when a patient has [wound] drains. For example to have a drain taken out, I've had those, I can tell them what to do. I know how to blow out so your muscles can't restrict [when the drain is removed]. But I still tell them (the patient) 'This is going to hurt.'

But, in a journal entry, another student voiced frustration at the expectations from peers.

> Student: I know I have a lot to learn even though I have the experience. So, it is frustrating when my peers make comments like 'Well, you should know, you had four babies.' I do have experience …(being) the patient (giving birth), but not being a nurse. I feel it puts a little more pressure on me for the upcoming exam.

Some students perceived that faculty had expectations due to their experience. This was described in the example above regarding a student believing she was being short changed on a clinical experience in Maternity. Other students felt faculty members would have different expectations if they knew about their past life experience. This was especially found in students who had healthcare work experience.

> Student: One thing that I was happy that I did not do. I did not tell the instructor or the staff at clinical that I was an LPN (Licensed Practical Nurse). I wanted to be treated the same as everyone else and to be given the same opportunity as them as well.

The expectations of nontraditional nursing students with previous life experience have a significant impact on the process of role transition. The experiences of reality shock, academic and clinical expectations are factors in role socialization. These expectations can result in disequilibrium of thought and role transition. The students in this study seemed to adapt their expectations and come to some resolution of equilibrium at the end of the course. But, it is important to note, that this may not always be the case. The small sample size of this study may not have not captured the following possibility noted by Bradby. "The transition into the clinical area may provide more problems for the student, which will continue for some time following completion of the course" (Bradby, 1990, p. 1224).

Emotional Conflict

The sub theme of emotional conflict was frequently described by students. All students expressed moderate to high levels of emotional conflict while in the clinical component of the course. Interestingly, no emotional conflict was found regarding the classroom theory course.

This student described strong feelings of sadness while caring for an elderly woman who had no family to visit her in the hospital.

> Student: I just feel bad for people … [without family support]. My grandmother was very sick before she had her open heart [surgery]. We were told that she probably wouldn't make it. So for her to make it, I really do think it had something to do with our faith first of all. But then, [I think] our family being there for her and encouraging her [made a difference]. But when I see people with no family, it just makes me so sad that they just have no one to come visit them. (Tears well up in eyes, voice cracks) They're the people … I think about a lot more when I go home. [I think] 'Wow, they're sitting there all day in the hospital.' I think it positively impacts them while I'm there because I really try to pay a lot of attention to them.
>
> Investigator: Does that feeling impact your ability to function as a student or learn the things you're supposed to learn?
>
> Student: No, not really. I feel like I can put it out of my mind when it comes to studying and papers. We do reaction papers where we reflect on our patients but it's more toward critical thinking instead of [focusing on] feelings.   I think that just the spiritual and nurturing things play as big a role as medical things when it comes to stuff.
>
> Investigator: So it's important for you to give that kind of care and then reflect on it?
>
> Student: Yeah, but sometimes that's distracting because they (teachers) are asking 'What's the most important thing you did for your patient today?' It's probably give them their blood pressure pills because their blood pressure is through the roof. But, [it's] the same thing, I just sat down and listened to them. [I think] …that's what they really needed.

While describing strong emotional feelings such as anger, sadness, disgust, and guilt, all students relayed that they felt it did not impact poorly on their ability to provide care. This was a critical point of follow up with the clinical faculty members. Each faculty member agreed that the students in the study did not allow personal emotions to affect their care. Faculty members did voice concerns about knowing how far to intervene when a student appeared to be upset in clinical. One faculty member commented on the students' perception that their emotional conflict did not negatively affect patient care:

> Investigator: When students have the perception that they were able to put their emotions aside in order to provide care, what is your opinion on that?

> Faculty member: I don't know if students are totally able to do that. I think they know that they're supposed to do that, but I know that it is not always the case.

> Investigator: Would you say that you saw situations where the student was [considered] unsatisfactory in clinical because of it?

> Faculty member: No, I think it is just something that some students have to work on a little more than others. I don't think it negatively had an impact on patient care.

> Later, the interview with this faculty member turned to how she intervened when

it appeared a student was having difficulty handling emotions.

> Faculty member: I tend not to [intervene] as a general rule unless I see it impacting negatively as far as safety or if I see it negatively impacting [on] a missed opportunity. I don't want to seem as if I'm intruding or trying to get into their personal life. That's not supposed to be germane to the situation at hand, but it is a fine line certainly. I have, as an instructor, pulled students aside and said, 'Is there an issue? There seems to be something wrong' [or] Tell me, am I not getting something [here]?'

> Investigator: [What do you do] if they share something personal with you?

Faculty member: Then I usually give them support about that. But I do say 'Part of being a nurse is mentally putting [your emotions aside]. Part of your job basically, is just taking a deep breath and putting all that aside and know that you are here for the patient.

The data did not reflex any situations where conflicting emotions negatively impacted student clinical performance. But, faculty members agreed that managing conflicting emotions is a skill where students have varying levels of ability. Faculty members also agreed that the role of faculty supporting students during emotional clinical situations was not part of their education. Faculty members voiced some discomfort with not knowing where the fine line is between support and over involvement. Another faculty member explained it this way:

Faculty member: I see helping students deal with their emotions in clinical as a way of socializing them into the nursing role. When you're in clinical, it's not about you (student). You need to be there for the patient. This is something that they will see over and over again in their career. I can talk to them, listen and give some perspective. But in the end, they need to learn to manage their emotions. I'm not a counselor or a therapist.

Factors in the resolution of emotional conflict. Emotional conflict resolution appears to be related to three factors: time proximity, intensity and use of adequate supports. This student provides an example of how time proximity and depth of emotional intensity can affect emotional conflict resolution. Her grandmother had died about one year ago after a long illness. The student was taking care of a terminally ill elderly woman who reminded her of her grandmother.

Student: Her (grandmother) death was so long ago, that it didn't really upset me to take care of this other lady who was dying. I mean, we were actually glad when my grandmother died in a way because we knew she was at peace and not suffering any more. I kind of took that attitude with my patient.

This same student had a sister admitted to a drug rehabilitation unit several weeks before starting clinical. In clinical, this student had a patient who had been a narcotic abuser who was hospitalized for a surgical procedure. This patient was in pain and was unable to be given strong narcotics due to his history of abuse. In her journaling, she describes the situation.

> Student: An experience that hit home for me was a former narcotic abuser that had surgery and was now struggling with pain management. I felt so sorry for this individual and felt horrible that he was in terrible pain. My sister has a problem with using narcotics. I often thought if something would happen to her, 'How would she be treated by healthcare professionals?' and 'How would [her] pain be managed?' Apparently, my fears were real. This patient was treated as if his pain did not matter… I tried to do as much for his pain with alternative pain relief measures as I could think of. I dimmed the lights, turned on soft music, rubbed his back. It made me feel better that I tried to let him know that his pain mattered to me.

During the interview, this situation and the emotional conflict the student experienced were explored further.

> Student: The day I had him (the patient), I felt very angry all day with the staff. I felt like they were treating the patient like he didn't matter. I really did. So, I was frustrated all day about the whole ordeal. I know that they couldn't give the patient narcotics and he didn't want narcotics. But, it just felt like his feelings and his pain was pushed to the side.
>
> Instructor: Were you able to talk to your instructor about that?
>
> Student: I didn't want anyone to know [about my sister]. My friends know, but as far as my instructors, I didn't want them to know. At the time, I was really stressed about my sister being in rehab. I didn't want them to know at that time because of the way people (judge) … abusers. I felt that, as professionals [faculty] they shouldn't (judge drug abusers), but I've seen professionals [do it].

This student also mentioned the role of the staff nurses on the clinical unit impacting her emotional conflict.

Student: I just didn't want to have to deal with the primary nurse because I didn't like her. I know it doesn't sound professional, but I didn't. I didn't like her. She was mean. She talked about him (patient) like no one loves him and no one cares about him. I don't know, there's just a negative condemnation that's associated with people who are addicts. I really have a new found mind set about addicts because they're sick. I think that a lot of times that's not fully understood.

The student went on to compare her response to her grandmother's death and her sister's drug rehabilitation.

Student: I think the difference in the timing made a big difference. With my grandmother, it's been a long time. I've had a chance to get used to it. Plus, we (her family) felt like it was better in the end (grandmother's death). But with my sister, it was all still so new to deal with. It was still going on at the time I was in clinical. Plus the fact that the staff did not seem very compassionate about it really made me angry.

Investigator: It sounds like you had a chance to resolve your feeling with your grandmother, but your feelings were still very intense about your sister. Would you say that's true?

Student: Yes, I was still so personally involved with all the issues for my sister.

This situation gives a good example of how the factors of time proximity, emotional intensity, and supports can influence emotional conflict. Other students had similar situations with one or more of these factors. Most students did not want to share personal feelings with their instructor. During the faculty interview for this student, the faculty was not aware of any emotional conflict with this student on this particular day. Students described seeking and receiving support for emotional conflict during the term from peers, friends, family, spouses, and clergy.

Some emotional conflicts may not be resolved due to the intensity of the feelings. A student who has previous healthcare work experience with Maternity patients had a situation which provoked strong emotions.

Student: I had an incident where I had a mother (maternity patient) who, I don't know if she had a drug use history, but she had this baby. She didn't want this baby. She told me she didn't want this baby. So, I sat and talked with her for a while. Then I went seeking guidance about what the next step is because I work with a social worker…and it is always followed up where I work if you say 'I don't want this baby'. That's taken very seriously [where I work] and it wasn't there [in clinical]. I was angry about that.

Investigator: What did you find out?

Student: I wanted to know if they do a Social Service referral or what about Kids Management (a local referral program). But, they (staff) just said 'No, we don't do anything. We just discharge her'.

Investigator: Did you talk to your instructor about that?

Student: Yeah, she just said that is their policy and we have to go by their policy.

Investigator: Did you talk much about it?

Student: I went to her (instructor) right away and [said] 'I don't feel comfortable.' She (the patient) told me that she didn't want this baby. I sat down with her and we talked. She said "I already have all these kids at home. I don't have a husband and they all have different fathers'. She looks like a poor soul, she really did. I felt bad for her and it just felt like 'Well, see ya'.

Investigator: Well, when you talked to your instructor, did she help you understand and talk through it?

Student: No, she just said that we've got to do what the hospital said.

This situation was specifically discussed with the associated faculty member who

had a different version of the resolution.

Faculty member: I remember that situation. Yes, she (the student) was very upset. Not crying, just passionate. But when I investigated [the situation], this hospital does not use Social Services in that capacity. They called it a Mental Health referral. The people came up and interviewed the mom and felt it was a safe situation to discharge her. Now of course, I know, they will follow up on the mom and intervene if necessary.

Investigator: Did you tell the student that?

Faculty member: Yes, I did, but she seemed stuck on the use of a Social Worker like they do at her work.

Investigator: Was she unable to see that the Mental Health referral accomplished the same goal?

Faculty member: I guess not. I thought I got through to her about it, but I guess I didn't if she still brought it up in the interview.

In this case, it seems that the intensity of the student's emotional conflict was so great that she was unable to assimilate the use of Mental Health services into her existing cognitive structure of how this situation should be handled. Although this is an extreme example, it serves to demonstrate how powerfully emotional conflict can affect cognitive restructuring. Intentional Conceptual Change theory identifies motivation and affective processes alone as strong enough to effect learning regardless of other cognitive and meta-cognitive abilities (Sinatra & Pintrich, 2003).

Personal Transformation

Students revealed that their learning in class and clinical helped them understand their own experiences better. In some cases, students felt it actually helped to resolve personal issues from a past life experience.

This student had one child and breastfed for several weeks. When the student began to have difficulty, she met with a lactation consultant. The student felt frustrated and angry because the techniques presented did not help and she subsequently was unable to breastfeed any longer.

Student: I learned [in clinical] that there were techniques [in breastfeeding] that you had to learn. It was not something that comes naturally. It's just something that you have to learn how to do. I learned that.

Investigator: How did that make you feel about your breast feeding experience?

Student: I only breastfed for six weeks. I wanted to do it much longer. It was kind of frustrating … because I did go to a lactation consultant. She assured me to breastfeed a certain way. When I did, my breast milk went down. Everything just stopped working because I took her advice. So, I was really angry with the whole situation. I was kind of upset with the whole lactation consultant and …I refused to go to any lactation consultant after that. So when I was in clinical, I learned it was more of a technique than somebody's fault [that I was not able to breastfeed].

Investigator: You felt like it was your fault or her fault because she gave you techniques that didn't work?

Student: I felt like it was her fault because she told me to do it a certain way which ended up stopping the process of breastfeeding. I couldn't breast feed after that. I've always been angry with her (lactation consultant) and disappointed that I didn't get to breastfeed as long as I wanted.

Investigator: So then, when you were in clinical and you see a woman whose breastfeeding without difficulty, how did that make you feel?

Student: I guess it just gave me the feeling that there's always going to be a second chance [for me to breastfeed with another baby]. [In theory class and clinical], I realized that breastfeeding was a technique where you have to learn how to regulate and balancing the feedings. There's more detail to it [than I thought]. I realized that what happened to me wasn't really her [lactation consultant] fault.

For this student, the knowledge gained about breastfeeding in theory and clinical,

helped change her perception of her difficult breastfeeding experience.

Another student had a grandmother with dementia who died several years ago.

Her clinical learning experience on a dementia unit gave a new understanding to her

grandmother's behavior.

Student: I remember some of the comments that my mother would make about my grandmother and what we thought [about her]. I sit here today and I think, 'Oh, lord, how cruel could we have been!'

Investigator: Because you didn't understand dementia then?

Student: Because I didn't understand. The information just wasn't there. If we had known [about dementia] then, we would have gone through that situation differently. It scares me because dementia and Alzheimer's is hereditary. But I find some kind of comfort in my heart knowing that if my mother ends up in the same position as my grandmother, thank god, we won't treat her the way we treated …[my grandmother].

Some events in clinical can foster a personal transformation in a student who might appear to have no personal experience with the clinical content. This student was twenty-five years old and was recently divorced with no children.

Student: It was my first day in labor and delivery and the nurse asked the mom-to-be if she had a baby book or anything like that for the foot prints. It was all the little silly details and that is what started to get to me. I teared up about the baby book, not to the point where I actually had any tears running down my face, but it did get to me a little bit. Personally, I had a very, sort of, structured outlook [on life]. I guess you could say, maybe as to how my life would progress when I was younger. I had everything pretty much planned out as to 'I'll do this' and you kind of [expect] life to go in this linear pattern.

Investigator: Things didn't happen the way you thought they were going to?

Student: I'm not where I thought I would be in my life at this point. If things would have happened the way I thought they were going to, I would have had two or three children by now and that's not the case. So, I had plans. A lot of my friends, who are my age, are married and they are having at least their first child at this time. But now, I'm feeling like there's still time and that it's probably not a good idea to so rigidly plan out your life like I did when I was younger.

Another aspect of personal transformation is how students change the way they see themselves and their knowledge. Several students in their journaling and during the interview process began to refer to themselves as the nurse as the course progressed instead of student nurse. A key factor in role transition is for the individual to begin to see themselves differently as they take on the new role (Bradby, 1990).

Student perceptions of their knowledge and actions were also seen to change to a more professional role. Early in the term, a student noted in her journal that she had provided the patient with *tips* on how to treat mastitis. But during the interview at the end of the course, she referred to the information as *nursing interventions*. Part of role transition is the adaptation of terminology linked to the role and the adaptation of old behavior into new behaviors specific to the new role (Bradby, 1990).

> Student: At first, I was thinking about what had helped me. I had mastitis four times and I've helped a few friends and my sister-in-law when they had it too. But later, when I had a patient with it, I did all [the] patient teaching and nursing interventions [from] the textbook. But I was also able to just give a few little bits here and there from my experience. [This] … was way more than the nurses could have done. I guess I was able to merge my experience with the textbook nursing interventions. I think it really helped her (the patient).

Students frequently discussed situations where they described being aware of adapting to a professional role. In discussing the ability to identify with the patient or family, many students volunteered the fact that they knew there were professional boundaries. Too much self disclosure would violate these professional boundaries. Several students specifically stated that they knew not to cross the line in sharing inappropriate amounts of personal information.

To verify this, faculty members were asked if they had seen any situations were a student was overly identifying with a patient or family by sharing personal information. Faculty members agreed that none of the students in the study were unprofessional by sharing too much prior life experience.

The following student had previously been on a medically supervised diet and lost 45 pounds. She describes how she integrated specific knowledge from her experience in

performing diet teaching with an obese patient without overstepping professional

boundaries.

> Student: I suggested some foods but I made a point to say 'This type of food tastes good to me and it has no salt or fat.' [For example], when the diet says to eat brown rice, I tell them which [brand of] brown rice tastes really good to me. There are lots of kinds of brown rice they could try, [this] is just a suggestion. It just shows them that I'm a human being just like they are. It's not like the doctor talking down to them like I've had myself before. I think people tend to have more of an open ear when they talk to a person who has gone through something before.

> Investigator: Did you tell them about your weight loss?

> Student: Oh no, that would be unprofessional. I just told them these were the things that I thought tasted good to me to lose weight. So, I kind of put my experience in so then it would be more specific for when they go shopping.

Another student described an awareness of professional boundaries regarding her

previous life experience.

> Student: Comparing my personal experience caring for my grandmother with the same kind of patient in clinical, no two situations are the same. I think it's important to keep that in mind and not to let your experience sort of override what you're seeing in clinical.

Importance of Faculty Role

All students emphasized the importance of the role of the faculty in theory class

and clinical. Understanding differences in old knowledge and new knowledge in class

were resolved by consulting the faculty either during or after class. In clinical, students

felt that faculty played a critical role in demonstrating the transfer of theory knowledge to

clinical practice.

> Student: At one point in clinical, I was getting so confused with stuff from class and the test with the patients in clinical. It was all … overlapping and … overwhelming. I talked to my instructor and tried to understand it better, like

'Why is this happening?' and 'Why [did] the doctor [do] this?' She [instructor] helped me a lot to understand what we learned in class [and how it related] with the patient I had.

Students appreciated that faculty acknowledged the psychosocial interventions with patients.

Student: I think my clinical instructors know that I'm … a nurturer. I'm always telling them something I did to make the patient feel better if they seem down. Even if I just take the time to talk to them.

Investigator: Do you include those types of things in your reaction paper (assignment)?

Student: Yeah, and they usually comment on how that's good to do. So I'm glad they're supportive of me doing those things instead of just worrying about meds and care plans.

Cognitive Restructuring

The second theme to emerge from the data concerns the process of intentional cognitive change. Two sub themes of Knowledge Conflict and Self Awareness were identified.

Knowledge Conflict

Knowledge conflict was a common issue found in the qualitative data. A cornerstone of intentional conceptual change is the ability to compare old knowledge to new knowledge, see the differences and regard the new knowledge as acceptable (Sinatra & Pintrich, 2003). Nontraditional students in this study described experiencing knowledge conflict in the theory class as well as in the clinical component.

Students were able to resolve knowledge conflict in classroom theory by either researching the area in question in the textbook or by speaking to the teacher. All students described resolving knowledge conflict by using the textbook or other reference. Talking with the faculty member generally resulted in a resolution of knowledge conflict in both the classroom theory and clinical component of the course.

The following student experience is an example of how previous knowledge about thyroid disease was conceptually changed. This student had several close family members with thyroid disease.

> Investigator: Have you had an experience when you thought you knew something from your past life experience and it turned out to be not quite right?

> Student: Yes, kind of with thyroid just because of the way I just always assumed that you were on Synthroid (medication) because you didn't have enough. I didn't realize how that worked.

> Investigator: Are you talking about the labs values, like TSH (thyroid stimulating hormone)?

> Student: Yeah, like if the TSH is up, then your thyroid is down. Then you need it. I always assumed if it was up [then] you didn't need Synthroid. But that's not right.

> Investigator: So, when you got to school and you understand that there are more factors here like the TSH level, T3 and T4 levels, when you had the realization that there's more to it than you thought, was it a positive or a negative feeling?

> Student: I felt okay and now I understand … because I guess I never really understood it right.

> Investigator: So you feel like it clarified your original understanding about thyroid? It sounds like you're saying that if you find something is a misunderstanding, then you want it clarified so you can know more, is that right?

> Student: Right

Investigator: So to realize you have to change your understand of something, is that difficult for you?

Student: No, I just want to make sure I get it right.

This is an example of how students demonstrated an openness and willingness to learn. They generally had no difficulty simply changing their prior knowledge to new knowledge.

When a student had difficulty with intentional cognitive change, an emotional component was found to be a factor in the student's ability to see new knowledge as valid and acceptable. In this example, the student felt very angry when she answered a question on an exam incorrectly based on her prior knowledge.

> Student: One question on our test was [about] the most reliable indicator of EDC (expected date of conception). The answer [on the test] was 'last menstrual period'. With all my children, [my doctor] … always sent me for an ultra sound for each child. That was the determining factor because they would date me by fetal size. I did get that wrong because of past experience.
>
> Investigator: How did you deal with that because you got it wrong?
>
> Student: I got it wrong, but the textbook does say even though the ultra sound is used as a means … for getting the EDC, but that the last menstrual period is the most reliable. So, I found out that.
>
> Investigator: After the fact, when you researched it and you found out that she (teacher) was right, how did you feel?
>
> Student: Oh, I was frustrated and mad at myself because I thought I had it down. I ended up getting a "C" on the OB (Maternity) exam. I expected to do a little bit better.
>
> Investigator: So, it sounds like when there's confusion in content knowledge, you go back and look it up and if you're wrong, you just change your knowledge.
>
> Student: Yeah, that's what I do, but I have to have it make sense to me first.

Another student describes having difficulty on a test due to past life experience with

growth and development principles. No emotional component was noted in this situation

and the student was able to conceptually change her knowledge without difficulty

> Student: I had a problem [on] a growth and development test because I had my daughter. I thought I would do really good on the test [but] that was the worst test out of all of them.

> Investigator: Really, why do you think that was?

> Student: I think it was just too generalized. They talked about magical thinking and play and how all the children play. I think the information was just too generalized.

> Investigator: I know you have one child who is eight years old. Did it seem like your past life experience was very specific as you saw her go through certain stages? Do you think that had something to do with it?

> Student: Yeah, I do because that information was connected to my daughter. I [thought] 'Oh yeah, I remember that'. 'Yeah, I did see that' and 'Yeah, she walked around the age of one'. I did see all that information and I connected those two, but when it came down to the test part, it just did not make any sense.

> Investigator: Do you mean that it was difficult to put your specific experience into such a broad category?

> Student: Yeah, I knew my daughter, but everything was so general. It was hard to pinpoint how what I knew fit into those questions.

> Investigator: How did you feel about that?

> Student: Okay, I figured I just had to learn it from the book right and not always compare things to my daughter.

This example of knowledge conflict demonstrates the importance of clinical

faculty clarifying class theory, prior life experience, and its' application in the clinical

situation. The following student had a personal history of having a difficult childbirth

experience. Several creative and noninvasive techniques were used by the student's

doctor to assist her in the pushing phase of delivery. This student's patient did not have

same techniques applied, but a more invasive approach.

> Investigator: What were your thoughts when you saw those things (invasive procedures) and it was different than your previous experience?

> Student: What did I think? That I'm not going to this hospital, because those techniques that they use … (voice trails off and pauses).   I guess, if I was in that situation, I wouldn't want that done. I mean the whole vacuum extraction thing.

> Investigator: The vacuum extraction you wouldn't want done?

> Student: Yeah, because I know that the techniques that my doctor used on me were totally different than what that doctor used on that girl.

> Investigator: It sounds like you're talking about in your pushing phase. Your doctor had you do certain things to help you push better which…gave you success. Whereas, you're saying this time, they used the vacuum extraction. They didn't use the other techniques. They went straight to the vacuum to get the baby out. Is that right?

> Student: Right.

> Investigator: Did that make you feel uncomfortable or concerned?

> Student: Well, I guess it was two totally different situations. I couldn't understand why they were using those techniques (vacuum extraction). It did make me uncomfortable because they didn't at least try the more conservative techniques.

> Investigator: Did you talk to your teacher or the nurse?

> Student: I did talk to the instructor afterwards. I asked her, 'Why was the decision so one-sided?' He (the doctor) just went straight to the vacuum extraction instead of considering other techniques. She explained to me because of the meconium staining (in the amniotic fluid) why it was more important to get the baby out right away. Then it made sense to me.

Knowledge conflict has been shown to exist as students described feelings of

confusion or lack of understanding. Generally, students resolved this conflict by the use

of textbooks or speaking with the teacher. Once a student recognized a need to change, a

goal orientation was developed. This is evidenced by student comments such as 'I know I need to learn more' or 'I just had to change what I thought.' This indicates a conscious desire and a motivation to change existing conceptual structures. Student motivation was clearly seen in an eagerness to learn. With the acknowledgement of "There's so much more to know", students denied any negative feeling of anxiety, fear of failure or lack of motivation. On the contrary, all students felt it gave them an increase in motivation to learn. This goal orientation of cognitive acquisition and change actually increased student motivation to learn. Motivation is one of the mediating factors in intentional cognitive change (Sinatra & Pintrich, 2003).

Cognitive ability is a critical factor in conceptual change. Nursing program admission criteria and progression policies provide a benchmark to maintain appropriate academic standards. These policies ensure that students possess a certain level of cognitive ability to be academically successful.

Cognitive resistance. Previous life experience can result in strong attitudes and beliefs in a particular area. When cognitive disequilibrium develops at the beginning of conceptual change, some students may want to protect their personal beliefs and attitudes. Learning that runs counter to those beliefs and attitudes may be perceived as a threat and can result in cognitive resistance. Anger or hostile behavior regarding the learning may result. These affective processes can be strong enough to impede or at least slow learning. (Sinatra & Pintrich, 2003). Two examples of this have been previously described but the scenarios will be reviewed here.

The first example is the student in Maternity clinical who was very angry about the hospital unit's lack of Social Service consult for a mother who did not want her baby. The faculty discussed with the student the alternative process the hospital used to achieve the same goal of evaluating the situation. By the end of the course, this student was still under the impression that the mother was not evaluated. The student only remembered the teacher agreeing that the patient was to be discharged. This is a clear example of how strong affective processes prevented the student from understanding a situation that was different than her personal experience.

The second example was the situation where the student felt she knew from her personal experience what was the most reliable indicator of EDC (expected date of conception). The student approached the teacher in a hostile, angry manner to say:

> Student: I know that my doctor told me that the sonogram was the most reliable indicator of EDC. I had sonograms to check my dates with all four of my kids. That's what was always used for me and that's what I put down.

Even after the teacher clarified the information, the student did not believe it until she researched it in the textbook. At that point, the student was able to change her understanding of the content when it 'made sense to me.'

Self Awareness

Students described a self awareness of meta-cognitive, motivational and affective process which mediate cognitive change. At this community college, an academic resource center was to available to students for learning skill assessment and training as

well as individual tutoring. Also, study skill courses were available as electives to

incoming and current students.

A student with Attention Deficit Hyperactivity Disorder (ADHD) described a self

awareness of meta-cognition and its impact on her decline in academic performance.

> Student: I was tested at the academic center and have some accommodations like, being in a different room, testing in the morning and having a note taker in class.

> Investigator: Do you have any insight into why you had difficulty this semester?

> Student: I was so de-focused at the beginning of the semester, it was just crazy…I got away from some of the hardcore set study things that work for me. I sleep with a tape recorder and listen to myself [read] test question [and] information. I got away from doing that.

> Investigator: In the academic center, were people there to work with you and develop these things for you?

> Student: Yes, but I actually developed my study skills when I took a course called 'College Success.' I learned a lot of my study skills in there.

Most students in this study did not use the academic resource center, even though

they were aware of its availability.   Students noted that when they missed a test question,

it was directly related to lack of studying, test preparation or study skills.

> Student: [When] I look back [on a test], I probably rushed through it and didn't read the answer thoroughly or read the question [correctly].

Another student, who did not use the academic center, reflected on earning a 'D'
on an exam:

> Student: I think it's the way the testing is. I'm not blaming the teacher. I think its' just … an area where I need help. I can regurgitate information one on one, but when you put a paper in front of me, I freak out. I think I'm more of an auditory learner. I know that when you get higher up [in college], it's more self study and reading. Where I learn better [is] when I can hear things so I can think more. I'm going to have to start doing study groups to hear other people talk. If I can hear it, then the 'Ah-Ha' effect will kick in.

Motivation was clearly noted in all students by their eagerness to learn. The following student provides an example of eagerness to learn in clinical:

> Student: I go look through patient charts and if there's something exciting to do [I go to my instructor and say] 'I was reading so and so's chart that they needed this done. Can I do that?'

> Investigator: What kind of response do you get?

> Student: They usually let me do it. I feel it's received positively. I feel that this is our time to learn. Some of the younger people in the class and my clinical group hide from the instructor because [they think], 'Oh, I don't want to do this.' Now is your opportunity to learn and get experience.

Some students noted it was their past life experiences that actually continues to motivate them to learn. This student describes attending a friend's childbirth and its impact on her motivation to become a nurse.

> Student: Being in those deliveries with my friend, is what made me want to be a nurse. The second delivery I was in [with my friend], the nurse … was amazing. I knew right then that [I wanted to be a nurse]. I was already a medical assistant, but I knew right then. I think I applied here (nursing program) the next day. So I loved every minute being in clinical (Maternity) this term.

This high level of motivation was reflected in most students being willing to simply change their knowledge structure to adapt to new knowledge.

> Student: I just figured I …have to change what I thought and learn it differently.

Other students used their motivation and cognitive ability to overcome a conflict in knowledge. This student had a two year old daughter and described having difficulty understanding growth and development principles, but still achieved a 'B' on the test.

> Student: My daughter did things earlier than the book said. [For example], she never [had difficulty] holding her head up. She always had a strong neck [and] her head never fell.

> Investigator: So learning about head lag was difficult?

Student: Yeah, I didn't really get some of the stuff. I didn't understand. 'What do you mean this happens when they're three years old? She's doing it now [at two years old].'

Investigator: Did you get [test] questions wrong because of that?

Student: No, I knew she was different than the book, so I just memorized it and I was fine.

Nontraditional students described a self awareness of their meta-cognitive, motivation and affective processes. This awareness can facilitate the process of intentional conceptual change.

In summary, two major themes were identified from the qualitative data in this study: Dimensions of Role Transition and Cognitive Restructuring. The theme of Dimensions of Role Transition is composed of several sub themes expressed by the students of Caring, Expectations, Emotional Conflict, Person Transformation and the Role of the Faculty. The theme of Cognitive Restructuring consists of the sub themes of Knowledge Conflict and Self Awareness.

CHAPTER V

DISCUSSION

In this chapter, the quantitative analysis and qualitative results are discussed and summarized separately. Implications of the findings and suggested areas for further research are integrated into each theme and sub-theme.

Discussion of the Quantitative Analysis

Demographic Data

The analysis of the survey findings will be presented first as a discussion of the demographic data, followed by a discussion of the previous life experience data.

The demographic data describes the sample as broad and diverse. The largest age group of nontraditional nursing students represented was the 24 to 29 age group. Although common to see students in this age group, the fact that they all had the characteristics of nontraditional students implies that they choose to continue their education despite obstacles not typically found in traditional students. The combined number of students within the remaining age groups contains more students than the youngest age group alone. This study found larger total number students over the age of 30 than those in their 20s. This suggests that adults continue to return to higher education at multiple points in life. The implications of this trend warrant more investigation and more monitoring to note changes in trends as the Baby Boom generation matures.

It seems the nontraditional nursing students have a broad and diverse experience across the life span that may have an impact on their learning.

The highest level of education reported by nontraditional students was identified as some type of technical training or certification. The second most common level of education was reported to be a high school diploma. These findings suggest that most of these students in this sample have not had any higher education experience and may require more preparatory courses and support in study skills. Qualitative findings in this study also support the facilitation of learning support services for nontraditional students. Further research is needed to investigate the use of different learning support methods among nontraditional students.

For many years, students with prior healthcare work experience have returned to school to become nurses. Typically, this has been seen in individuals with direct patient care experience such as Medical Assistants, Certified Nursing Assistants, Licensed Practical Nurses or Paramedics. This sample describes a more varied background of prior healthcare work experience than previously noted (Meinert, 1989). These prior healthcare work experiences reflect the majority of technical training or certification education previously noted. Technicians in the areas of Pharmacy, Dialysis, and EKG are examples of healthcare employment with specific technical training. Also, the combination of administrative skills and healthcare was found in the work experience cited by Medical Secretaries, Unit Clerks, and an Operating Room Coordinator. Working with individuals as a caseworker or a counselor for patients with physical or mental problems may have encouraged a student to pursue nursing as a career. These findings

suggest that a broad range of individuals working in any area of health care may be a candidate for interest in nursing education. This concept has strong implications for schools of nursing for recruitment of students. Future research could investigate the differences between academic and clinical performance with nontraditional nursing students based on different types of previous employment experience.

A surprising finding was the number and types of students reporting having one or more non-healthcare related jobs before taking a healthcare job. Thirty five out of fifty four students described having a broad range of experience in business, service or professional areas before taking a position in a healthcare related job. This fact was congruent with the finding of a broad range of ages in the sample. These students have a larger life experience in areas other than healthcare with varying levels of responsibility. To return to school in the role of student nurse may produce a dramatic shift in a student's self esteem or perception of competence. These changes could be perceived as a threat to self esteem. This could potentially have an impact on the student's relationship with superiors such as faculty, staff nurses, physicians and other healthcare workers during their education in class and clinical. The implications of these findings are integrated into the qualitative data analysis of the dimensions of Role Transition.

Previous Life Experience

The survey findings suggest that the sample of nontraditional students have a broad range of previous healthcare life experience. It is significant to note that all students reported having some amount of experience with Death and Cancer. On the

other hand, a small to moderate number of students reported no previous healthcare experience in the remaining areas in the survey. The data indicated a majority of the students subjectively reported small, moderate, or large amounts of previous healthcare life experience. It is important to note that students' subjective perception of their experience may vary widely from an objective measure of their experience. The data suggests that most nontraditional nursing students have had some exposure to a wide array of healthcare experiences. This has implications for educators to be aware of experiences in order to facilitate learning and prevent confusion. This could be achieved by a student survey of previous life experiences in the content areas presented in the current course. Student conferences may be warranted on an individual basis. For example, if a student had a parent who died from lung cancer recently, a faculty member may want to talk with the student in anticipation of the course covering lung cancer. This anticipatory intervention could foster the coping of any emotional or cognitive conflict which may occur during the course. This would also set up the faculty member as a support during the learning process and not just an evaluator of performance.

It is important to note that students self-reported the amount of previous healthcare life experience. This self-reporting could be affected by the student's memory, perception and individual judgment skills. This factor could have impacted the student responses and estimation of amount of life experience. Future research in this area should utilize more objective methods of measurement for previous life experience.

Previous life experience can be an important factor when looking at the effect of this experience on changing cognitive structures in nursing education. This will be

discussed in depth in the qualitative discussion under the Cognitive Restructuring sub-theme.

Personal Healthcare Life Experience

The study described the frequency and specific types of personal healthcare life experience for the sample. Although not considered in the design of the survey, most students divided their responses into two areas. Previous healthcare life experiences with others included experiences with family members and friends. Personal previous healthcare life experience was described as something that happened to the student personally. The amount of data collected in this area was so large that it was determined to be an important aspect of the student responses. Therefore, the types of personal healthcare experience were included and presented separately in the data analysis. Since this delineation of the data was not anticipated in the survey design, it cannot be assumed that all personal, previous healthcare life experience was obtained. Future research in this area could include this consideration in future survey designs to gather more comprehensive data.

It is not surprising to see Obstetric/Gynecology as the most frequently reported area of previous healthcare life experience considering that the sample's age ranges fall within the childbearing years for women. The specific areas of miscarriage, infertility, rape, and cervical cancers were also cited as areas of personal experience. Although no students reported abortion as a previous life experience, it cannot be discounted as being a significant experience to a student, but not reported. These findings suggest that a faculty member may not be readily aware of these experiences due to their personal

nature.   The impact of these highly emotionally charged personal experiences have implications for nursing faculty during a Maternity Nursing course.   These will be explored in depth in the qualitative data discussion regarding emotional conflict and learning.

Respiratory, surgical, and emergency room experiences were reported to have a large amount of personal life experience. Respiratory experiences include asthma, pneumonia and bronchitis. Surgical procedures were also cited as a large source of personal life experience. Students described surgical procedures that are very commonly seen during clinical nursing education. The experiences included appendectomy, tonsillectomy, hysterectomy, gall bladder removal, and caesarian section childbirth. Emergency room visits were noted as one of the most common personal previous life experience. Again, those types of visits are common Medical/Surgical issues that a nursing student would see during a clinical rotation. The visits were for abdominal pain, stitches for lacerations, fractures, kidney stones, panic attack, anaphylactic reaction, and treatment after a motor vehicle accident. The qualitative analysis discussion will address the potential impact on learning and role transition described when a nursing student has a clinical experience similar to their own personal experience.

Quantitative Analysis of Course Grades and Previous Healthcare Life Experience

Students were enrolled in a course with a Medical/Surgical component and a Maternity component during the second term of a four term Associate Degree nursing program. Each component had a theory class one day per week and a clinical experience

twice a week for eight weeks. Students studied one component for the first eight weeks of the term and then switched to the other component for the last eight weeks of the term. Each student had a separate theory grade calculated for each component based on exams, quizzes, and assignments. The situation provided a separate Medical/Surgical grade and a Maternity grade for each student for the term.

The clinical experience for each course component was graded subjectively on a pass or fail system. All students in the study were evaluated as a "pass" for each clinical experience component of Medical/Surgical and Maternity at the end of the course.

Previous life experience scores for Medical/Surgical were calculated by adding the previous life experience scores reported by the student for each of the twelve Medical/Surgical areas of the survey. This gave each student a total previous Medical/Surgical life experience score. This group of 20 students were divided into a low previous Medical/Surgical life experience group (scores from 6 to 18) and a high previous Medical/Surgical life experience group (scores from 21 to 36). The Obstetric/Gynecology previous life experience score was the single number between zero and three reported by each subject. The same group of 20 students were divided into a low previous Obstetric/Gynecology life experience group (scores of zero or one) and high previous Obstetric/Gynecology life experience group (scores of two or three). These calculations placed each student in either high or low previous life experience group for the Medical/Surgical component and the Maternity component.

The amount of past life experience reported in each area of Medical/Surgical and Obstetric/Gynecology was found to have significant variability. Noting that this group of

nontraditional students had significant differences in the amount of previous life experience, serves to highlight the importance of the qualitative findings. The implications of this can be applied in the organization of clinical groups. Traditionally, clinical groups are designated with little regard to student characteristics. Affective and cognitive clinical learning may be fostered by assigning clinical groups based on the amount or type of previous life experience. This would allow faculty members to apply the implications of the qualitative findings in a homogeneous group. The clinical group homogeneity could provide a supportive resource to students based on a commonality in their clinical experience. Further research on larger samples need to be completed to verify a true variability in the amount of previous life experience.

The quantitative aspect of the research question involves the effect of previous life experience on learning and cognitive restructuring. The study found interesting differences in the effect of previous life experience on theory grade measured quantitatively and on the clinical experience measured qualitatively. No correlation was found between the amount of Medical/Surgical previous life experience and in Medical/Surgical course grade. Similarly, no correlation was found between the amount of Obstetric/Gynecology previous life experience and in Maternity course grade. The findings suggests that theory grade is not related to the amount or type of previous life experience in nontraditional nursing students. These findings require further research with larger sample sizes to establish adequate reliability and validity.

The total amount of experience was also found to have no correlation with either a student's Medical/Surgical or Maternity course grade. Although of all these correlation

findings, the Medical/Surgical correlation was highest at r = 0.31, p = 0.18. This finding

call for further investigation with larger sample sizes to determine if a true correlation

exists.

A moderate positive Pearson correlation coefficient at the 0.01 level was found

between the Medical/Surgical grades and Maternity grades. This suggests that students

who scored higher in the Medical/Surgical theory component tended to score higher in

the Maternity theory component. The implication is that a student's academic ability is a

strong influence on academic achievement without regard to the amount of previous life

experience. The findings underscore the importance of an admission assessment of

academic ability and learning skills to identify students at risk for academic failure. The

use of an academic resource center for ongoing support and follow up can have a strong

impact on student grades throughout the curriculum.

In summary, it appears that previous life experience had a greater impact on a

student learning in the clinical learning area than in classroom theory.

Discussion of the Qualitative Findings

The major qualitative data themes of Dimensions of Role Transition and

Cognitive Restructuring were found in a wide range of theory class and clinical

experiences in both the Medical/Surgical and the Maternity components of the course.

Each theme and the corresponding sub-themes will be discussed in detail. Implications

of the findings and suggestions for further research are integrated into the discussion of

each sub-theme.

This study contributes an additional consideration in learning of nontraditional nursing students not previously identified. Knowledge conflict is readily accepted as a part of the learning process. This study describes the affective conflict within the learning process for these students. Transitioning previous experience knowledge into the application of new knowledge for nursing students involves significant affective conflict which impact learning. This finding requires further research to determine how much conflict is unavoidable and which can be anticipated and minimized. There may be nothing nursing faculty can do to prevent this conflict, but be aware and sensitive to the inter-relationship of affective and knowledge conflict. Student behaviors, attitudes and emotions may be identified as part of the affective and learning conflict resolution in nursing education in nontraditional students. These concepts could be a foundation for other disciplines who educate students with previous life experience. This demonstrates a wider range of application for adult learning and education.

The process of affective and knowledge conflict requires further study to determine if nursing students are truly internalizing the resolution. This internalization could positively impact future nursing care. The nurse who has experienced the process of emotionally accepting and cognitively changing knowledge should be able to relate to these same processes in patients and their families. This could result in more holistic and culturally sensitive nursing care.

Dimensions of Role Transition

Dimensions of Role Transition is a multidimensional theme encompassing seven distinct sub-themes. These sub-themes include Caring, Expectations, Emotional Conflict, Personal Transformation, and Faculty Role. Each sub-theme will be discussed separately with implications for future research and recommendations integrated within the discussion.

Caring

The sub-theme of caring was identified as significant factor in the student's motivation to provide patient care and teaching. The terms empathy and compassion were commonly used in the description of student feelings toward the patient. It is heartening to identify caring as a dominant concept in the data. Nursing education has been working to integrate caring in nursing curricula since the 1990's emergence of Jean Watson's Theory of Caring (Watson, 1993). It appears that these nontraditional students come to their nursing education with an established caring perspective. The previous life experiences of childbearing and childrearing may play a role in coming into nursing education with a caring attitude. On the other hand, it is important to note that even nontraditional students without any childbearing or childrearing experience voiced the same empathetic and caring feelings toward patients. The caring attributes any traditional or nontraditional student brings to nursing education is a area for further research. Future research could explore the effect of specific life experiences on caring for patients in specific related clinical areas.

Identification with the patient was a significant factor in students verbalizing feelings of caring. This was seen frequently in students with a personal pregnancy experience during their Maternity clinical. However, students with specific Medical/Surgical life experiences also voiced caring concerns with patents that were experiencing a similar or related Medical/Surgical situation. This indicates that the feelings of caring and identification may not be directly linked to a student having the exact same experience as the patient. These feelings may be a function of a combination of adult development, maturity, motivation, and previous life experience in general. A caring attribute might be considered a broad attitude and not specifically linked to previous life experience. The fact that students used these feelings of caring to act in the role of the nurse to anticipate and provide nursing care makes them a significant factor in the clinical learning experience. The data suggested a benefit of previous life experience was the student's ability to anticipate and meet patient physical, emotional, and teaching needs. This type of anticipation of needs is not typically noted in a traditional age student with a limited life experience. This suggests that nontraditional nursing students may provide more specific interventions for patient care then traditional students, due to their previous life experience.

Expectations

Reality shock is a common experience for nursing students of any age and new graduate nurses entering a clinical environment. Among nontraditional students, reality shock appeared to have specific characteristics related to their previous life experience.

The data provided several examples of previous healthcare work experiences and previous personal health care experiences by students that were vastly different from what they saw during the clinical learning experience. Students noted feelings of shock, disgust, disappointment, and anger when their expectations came into conflict with the clinical experience. It is important to note that these nontraditional students had these expectations based on actual personal or professional experiences. These expectations were not based on a fantasy or a media image of the role of the nurse. In most cases, it was unfortunate to note that students did not discuss these feelings with any faculty member. Sometimes, these expectations can be clarified to help a student understand the uniqueness of the current situation. Other times, students actually observed staff nurses making a clinical mistake, breaking a policy or acting unprofessional. These are difficult situations for faculty members to navigate. Faculty members have an obligation to educate students, but also need to maintain a good working relationship with the clinical nursing staff. These situations should be handled delicately to help the student understand a clinical situation, while discussing alternative interventions. This can be a significant part of teaching nursing role socialization. For example, a faculty member could initiate a discussion on how to handle seeing another nurse break sterile technique or make a medication error. Areas of discussion could include the acknowledgment of the mistake, what should have been the correct behavior and how this should be handled in a professional manner. This could be an avenue of rich clinical learning if the opportunity is seized. If students do not come to faculty members with these issues, then they need to be attentive to potential situations that can be used for this type of

discussion. If faculty members do not address a mistake made by a staff nurse, it can speak volumes to the student and have far reaching implications for future student behavior.

Reality shock experiences can happen at any time during the clinical experience and can be used for individual or group discussion. This study did not investigate the timing of reality shock and the student relationship with faculty members. This would be important to note if student reluctance to discuss these issues occurred more frequently early in the term when a supportive relationship is not yet established with the faculty member. These findings support the need for faculty to be open and supportive of student expectations and clarify them as needed.

Both academic and clinical expectations were a concern for nontraditional nursing students in this study. Although students with some healthcare background felt they should perform better in class and clinical, it is positive to note that students eventually realized this was an unrealistic expectation. Upon realizing this, students described a new understand of the scope of nursing education and stopped "beating themselves up." It is unknown what factors allowed the students in this sample to arrive at this realization. With a larger sample size, it may be possible to identify a student where personal expectations from a previous healthcare job may set themselves up for unrealistic performance expectations.

Expectations of performance based on previous personal life experience seemed a little more difficult for students to reconcile. This was most notable with the students who had personal Maternity experience. Poor theory or clinical performance seemed to

be viewed as a threat to self. The experience of childbearing and childrearing is so intrinsically woven into a woman's sense of self, it is understandable that poor academic or clinical performance could be perceived as a threat to self. Although all students eventually accepted poor performance as a lack of knowledge, this area seemed to be more difficult for students to resolve. As seen in Intentional Cognitive Change theory, students may develop cognitive resistance to learning if they feel their sense of self is threatened. This can be a factor in poor clinical and academic performance and will be discussed in depth within the Cognitive Restructuring theme.

It was not surprising to find that all nontraditional nursing students felt an advantage, due to their previous life experience. Students verbalized this attitude in regards to both class theory and clinical experience early in the term.   Adult maturity, communication skills, familiarity with material, and parenting skills were all noted as advantageous in the role of student nurse.   By the end of the term, students expressed embarrassment regarding this initial attitude. Students acknowledged that nursing education was far more complex than they originally anticipated. Several students had experiences when they thought their previous life experience was a disadvantage to their learning. It was interesting to note that this attitude came full circle by the end of the term. Students were able to look back and see where they were unrealistically overconfident in their knowledge base and clinical abilities. All students came to a point in the term where they admitted to themselves that they had a lot more to learn. This was most openly noted during the Maternity portion of the course. Again, this could be related to the specific nature of the content and students having their own personal

Maternity experience. During the interviews, students appeared humble and embarrassed about their overconfidence at the beginning of the term. This might be a common transition for nontraditional nursing students to go through some variation of overconfidence, realization, and acceptance of the body of knowledge and clinical skills needed to function in a specific area. Further research with larger sample sizes could establish the existence of this pattern and how it progresses through the curriculum. The implication for faculty members is to recognize the overconfidence or superior attitude of nontraditional students might be part of a transition in role, knowledge, and self esteem that can come to a resolution.

Expectations by peers were seen both positively and negatively. Some students saw this as a way to share expertise and experience. This could positively impact the student's self esteem while already experiencing a threat to self as previous discussed. Other students felt frustration that peers expected them to know information or have skills based on their previous life experience. This could raises feelings of self doubt or incompetence. Expectations by peers toward nontraditional nursing students could have a positive or negative impact on the student's self esteem which may impact learning positively or negatively. These expectations by peers should be closely monitored by faculty members in theory class and in clinical experiences to promote a healthy learning environment.

Nontraditional students can have mistaken perceptions about the expectations from faculty members. Several students voiced concerns regarding the perception that they were treated differently or would be treated differently by the faculty member based

on previous life or work experience. These perceptions can be very damaging to the student-faculty relationship, if misunderstandings are not clarified early in the term. The fact that in most scenarios, students did not want to share these perceptions with faculty members makes these silent perceptions even more destructive to the learning process. During faculty member interviews, student perceptions of faculty expectations were found to be false. Most faculty members were surprised and unaware of student misperceptions. Further research need to be done in this area in order to address these misperceptions early in the term to counter any misunderstanding between a student and a faculty member. This triangulation of data suggests a relationship between perceptions, silence and misunderstanding in student/faculty relationships.   Further research is needed in this area to explore this phenomenon further.

By the end of the term, students who thought they were treated differently by faculty based on previous life experience, realized and acknowledged their misperception. In most cases, students eventually noted that they were given the same opportunities for learning as other students in clinical. It is positive to note that although some nontraditional students had misperceptions of faculty members' expectations, by the end of the term they were able to see their perceptions in a more objective light. This is important to keep in mind as student's progress throughout the curriculum. As their education progresses, it would be important to note if a student's clear perceptions of faculty members expectations become easier to establish over time.

All nontraditional students described feelings of motivation and great interest in nursing based on their previous life experience. Students were eager and anxious to learn

based on their level of motivation and goal to complete their nursing education. Several students had higher goals in nursing to become nurse practitioners, nurse anesthetists, and educators. These students came with defined goals and high levels of motivation behind their expectations. These can be considered strong assets in the process of intentional conceptual change. This theory cites motivation and goal orientation to be significant factors as students attempt to change existing cognitive structures and learn new knowledge (Sinatra & Pintrich, 2003).

Emotional Conflict

All nontraditional students in this study described moderate to high levels of emotional conflict in the clinical component. Some frustration and anger was noted during theory class in relation to knowledge conflict, but this was seen at lower levels than in the clinical component. Knowledge conflict will be discussed in depth under the theme of Cognitive Restructuring.

Students verbalized moderate to strong feelings such as of confusion, anger, sadness, guilt, and envy during the clinical component. It was interesting to note that these feelings arose in situations with patients, family members of patients, staff, physicians and faculty members. These findings are significant as they have the potential to impact the student's learning of content and role acquisition. These student feelings and associated negative behaviors could also have a negative impact on the relationship between the nursing program and the affiliated hospital clinical unit. If a student's emotional conflict is not addressed, it can escalate to inappropriate and unprofessional

behavior towards patient, family members of patients, clinical staff, and physicians. This could easily jeopardize the nursing programs' use of a particular clinical site. In many areas of the country, maintaining good relationships with affiliating clinical sites is a significant concern to provide adequate clinical experiences for students.

All students noted that they were able to prevent emotional conflict from interfering with their clinical performance. Initially, it might be expected that this is an example of overconfidence in one's ability as previously described. Triangulation of this data with faculty members' input found some support for this belief. Faculty members agreed that emotional conflict did not result in an unsatisfactory clinical evaluation for any student in this study. Yet, they pointed out that students' possess a varying level of ability to cope with emotional conflict which should be monitored. Due to this small sample size, further research may be able to identify situations where emotional conflict was so great that clinical performance was compromised. Identifying these factors would be important for faculty members to monitor. Faculty members did verbalize concerns about exactly how and when to step in when assisting students with emotional conflict during clinical. They wanted to provide support to the student, but had concerns of becoming too emotionally involved. Faculty member involvement in either extreme of support or over involvement would be ineffective and inappropriate. Most faculty members agreed on one clear indicator which necessitated action. They noted a significant dividing line had been crossed demanding involvement when emotional conflict affected the student's ability to provide patient care.

Preventing the impact of emotional conflict on patient care was noted by faculty members as an important skill for students' role transition. They agreed and recognized that helping students foster role transition was just as important as performing clinical skills in the clinical area. The role of the faculty member in student nurse role socialization can be a rich source of research and professional development for educators.

Students had mixed reactions regarding faculty members' responses to their emotional conflict. Some felt the faculty members provided positive support appropriately, but others felt that they were too focused on the clinical aspects of a situation to discuss emotional conflict issues during clinical. Students cited the use of a reflection paper assignment, but felt that the faculty members' expectations were to include more physical than psychological aspects for themselves or the patient. This perception by students was not addressed with faculty members during interviews and therefore not available for triangulation analysis. This area could be another misperception by students which needs to be clarified on a continuous basis during the term.

Factors in the resolution of emotional conflict. Several factors were identified as critical in the resolution of emotional conflict. Time proximity was described as how long ago a previous life experience had occurred. It appears that when a student had enough time to psychologically process the experience and gain some perspective, the student expressed little or no emotional conflict regarding a similar situation in clinical. Several examples were cited in the data where a personal experience was recent or

ongoing which seemed to heighten the emotional conflict intensity expressed by the student.

The second factor of intensity may be related to the factor of time proximity in some students. Intensity of emotional conflict was seen as the strength of the emotional reaction with words or behaviors. Students reported going home and crying, becoming angry with a faculty member, or avoiding a staff member. One student's previous life experience of the death of her grandmother occurred about a year ago. The student reported no emotional conflict when caring for a elderly female patient in a similar situation. The student was able to verbalize feelings of resolution and perspective gained over time regarding the death of her grandmother. This could have been a factor in the minimal level of emotional conflict and its intensity described by the student in this patient situation. Although not seen in the data, it is important to note that time proximity could be completely unrelated to the degree of emotional conflict intensity for the student. Certain highly charged previous life experiences may never be completely resolved by an individual. Chronic sorrow is a widely accepted term associated with the death of a child that conveys the inability to completely resolve grief. For example, a student with a previous life experience of a stillborn infant may have a strong intense emotional conflict during a maternity clinical rotation no matter how long ago it occurred. It may be judicious to assume that any previous life experience a student brings to clinical that has not been emotionally processed or resolved could develop into an emotional conflict.

The third factor in the student's ability to resolve emotional conflict was the use of available supports. As noted, very few students spoke with the faculty member about emotional conflict. More commonly seen was the student's conscious decision to not share emotional conflict with the faculty member. Some cited the conflict as too personal to share. Others were not sure if it was appropriate to share emotional conflict with faculty. This may be a result of previous student perceptions that faculty members were more concerned with physical learning in clinical than the student's personal emotional adaptation to the role. This can be a significant area to discuss with students early in a term to again clarify misperceptions.

Students used alternative supports in emotional conflict resolution. Students cited the support of peers, family, spouses, and clergy as an important part in resolving emotional conflict experience in the clinical experience. These students may have started their education with an intact and highly developed support system to assist them. This can be seen as a major asset to nursing students. Conversely, if a student does not have a good support system established, they may have more difficulty resolving emotional conflict. It cannot be assumed that nontraditional students have a better support system than traditional students. A student at any age could have varying levels of support available to them to assist them with emotional conflict. Faculty members may need to assess the student's available support system and direct them to outside sources when needed to resolve emotional conflict.

Personal Transformation

Students cited various examples of personal transformation. The adaptation to the role of nursing was frequently noted. In journal entries, it was interesting to note that some students referred to themselves as a *student nurse* early in the term, while using *nurse* by the end of the term. This example of transformation was also seen in actions. By the end of the term, students referred to their care as *nursing interventions.* Earlier in the term they talked about giving the patient *tips*. The data appears to describe a transition from an individual wanting to share information about a previous life experience to a nurse using nursing interventions based on theory as well as personal experience. Students discussed examples where their previous life experience allowed them to provide more specific and in-depth care and teaching to patients and their families. This change in the student's ability to view and augment their previous life experience knowledge is discussed within the theme Cognitive Restructuring. These students were able to transform their previous knowledge, add to it and view it in a new frame of reference.

While acknowledging the usefulness and value of previous life experience, student were still able to identify the need to set professional boundaries and not share an inappropriate amount or type of personal life experience with patients or their families. This may have been an evolving concept for students during the term and not fully voiced until end of the term interviews. No journal entries alluded to this concept, but students were quick to point out the potential unprofessional nature of excessive personal disclosure with patients and their family during interviews. It is positive to note the

awareness of professional boundaries by students. It is unknown if this is a function of adult maturity or personal experience of nontraditional students. Research on the awareness of professional boundaries of traditional and nontraditional students could be explored further.

Student perceptions of their ability to maintain professional boundaries were discussed with faculty members. Again, this could have been an area of overconfidence, but faculty member interview data supported this assertion by the students. Faculty members denied noting any students' behavior when previous life experience was shared with a patient or family inappropriately. This finding may be related to the maturity and judgment skills of the nontraditional student. The student may have been in a previous employment situation where a similar type of professionalism was required.

Many students described their theory and clinical experience as providing an opportunity to understand their previous life experience. Having a better cognitive understanding seemed to help provide an emotional resolution for many students. This can be seen as an unintended benefit of a student's nursing education. Students were able to reflect and gain perspective on person life experiences that had been negative or misunderstood.

Students with a higher amount of Maternity previous life experience described the role transition to Maternity clinical as easier and more comfortable. As noted, this may be due to the highly specific and narrow area of content in this area. Some students verbalized feeling comfortable with the transition to a Medical/Surgical unit if it was similar to their healthcare work experience. This may suggest that a greater amount of

previous life experience in a particular area can assist in the student's role transition.

There is no data available to determine if ease in role transition is related to clinical

performance. This is another area for future research.

Cognitive Restructuring

The second major theme identified in the data was that of Cognitive

Restructuring. This theory is based on the premise that a student brings a certain amount

of previous knowledge to their education. Nontraditional students bring previous

healthcare life experience to their nursing education by way of adult development,

personal or professional life experience

In this study, the quantitative data described the varied amounts and types of

both personal previous healthcare life experience and previous work healthcare

experience by students. These varied experiences have provided specific knowledge

about healthcare, illness, and disease. This current knowledge must be intentionally

changed in order to either assimilate it or accommodate it into new knowledge presented

in theory class and clinical.

Knowledge Conflict

The first sub-theme of Knowledge Conflict is a key component of Intentional

Cognitive Change theory. The first step to intentionally change a cognitive structure, is

for a student to compare current knowledge with the new knowledge presented by the

teacher. Once compared, the student must be willing to accept the new knowledge. In

this study, students were highly motivated to change their cognitive structures. This acceptance could be based on the student's view of the new knowledge as either superior or just different than the previous knowledge. Students in this study described both types of acceptance with cognitive change. Students frequently noted that they just "changed what they thought" to accommodate new information. Others noted that the new knowledge had to "make sense" before they could accept it.

Almost all students acknowledged the amount of theory and clinical content to be learned was much more than they anticipated. Ironically, not one student described this realization as causing any negative feelings of fear, being overwhelmed, or desire to drop out of the program. The concept that "there's a lot more to know" seems to have only motivated students further the learn more. Some talked about knowing something as a patient or as a mother, but wanting to understand it from "the other side of the bed as a nurse." Clearly, the high level of motivation and goal orientation displayed by these students were major factors in their ability to intentional change current cognitive structures.

Cognitive resistance. A few exceptions and related issues were noted in the data regarding Cognitive Restructuring. Cognitive resistance is a critical factor in the theory of Intentional Conceptual Change. When a student perceives new knowledge as a threat to their self esteem or their competence as a parent or employee, the result can be cognitive resistance. This can be demonstrated by anger, hostility, apathy, emotional, or academic withdrawal. The student may argue vehemently or demonstrate disrespect to

the teacher. These intense situations can be difficult for faculty manage in a classroom or clinical setting. By understanding the concept of cognitive resistance, the teacher can view the outward negative behavior as a manifestation of the student's refusal to accept new knowledge and perceives it as a threat. With this understanding, an emotional situation may be diffused enough for faculty to clearly respond to the knowledge conflict and not the negative behaviors of the student. The knowledge conflict and the emotional responses may need to be addressed by different individuals with the student. Responding to the knowledge conflict, faculty members could explain the difference between the assimilation of new knowledge into existing cognitive structures and the accommodation of new knowledge into new structures. Acknowledgement of the difficulty in intentional cognitive change can provide support for the student. Students may need assistance to cope with the feelings associated with cognitive resistance. This may be best accomplished by an advisor or counselor and not the faculty member involved. It is important for faculty members to be aware that certain students may not be able to overcome cognitive resistance and may eventually withdraw from the class or program. This may suggest larger issues that can not be resolved in an academic setting. An awareness of the process of cognitive resistance can support faculty members in understanding and managing negative student behavior.

The concept of cognitive resistance was seen in the data with the student who was involved in a highly emotional situation.   She was caring for a Maternity patient who did not want to keep her baby and perceived the staff nurses as not handling the situation correctly. The triangulation of faculty data further supported this example of cognitive

resistance. The faculty member tried to explain the use of other resources by the staff

nurses which would achieve the same goals for the patient. This was an attempt to assist

the student to cognitively assimilate the use of the Mental Health referral into the pre-

existing cognitive structure of a Social Work referral. It appears the highly emotional

disequilibrium experienced by the student prevented her from making this cognitive

structure change. Even at the end of the term during the interview process, this student

still believed the patient had not received the appropriate referral. The fact that this

student remained in the program is a testament to her high level of motivation and goal

orientation to become a nurse.

A different issue can be raised regarding the student who had difficulty with

learning growth and development principles that did not fit her daughter. In this case, the

student acknowledged that it was easy to change her cognitive structures because it

showed her daughter was advanced in her development. This raises a question as to

whether a student whose child appeared to be delayed in development would be able to

change cognitive structures as easily. Similarly, if a student had a negative or atypical

previous life experience, would it be more difficult to change cognitive structures? Based

on Intentional Cognitive Change theory, this student may display some amount of

cognitive resistance as this new knowledge can be seen as a threat. This data

demonstrates the importance of faculty members understanding a student's previous life

experience to promote learning and foster cognitive restructuring.

Both of these examples of cognitive resistance are related to a student's

perception of new information as a threat. This could be a threat to self esteem as a

mother, a threat to self confidence in their abilities to perform clinical skills or a threat to their self identity as a provider of care. A student's response to any of these threats can be one of anger, resistance to change, physical, emotional, or academic withdrawal. Faculty members may find it difficult to respond appropriately to this type of student behavior. They may perceive a negative student response as a threat to themselves as teacher, mentor, authority figure, professional nurse, or role model. The reaction response between students with cognitive resistance and faculty reaction response is a complex interplay of emotions and behaviors which need further study. A dialogue between faculty members on this topic could assist in fostering understanding of the phenomenon of cognitive resistance.

If a student had a positive personal experience, cognitive resistance may occur if the student is advocating for the patient to have the same positive experience. Faculty members need to view this as a positive response by the student by advocating for the patient's best interests. This was illustrated with the Maternity student who had a good personal experience with a less invasive technique during the pushing phase of her birth experience. Her confusion and anger seemed to stem from her desire to give her patient the same type of positive experience. In this instance, the faculty member was instrumental in diffusing the situation by pointing out the patient factors that necessitated the use of more invasive procedures. This insured a rapid delivery for the patient and minimized potential complications for the baby.

One aspect of cognitive resistance can be viewed in relation to Piaget's theory of assimilation and accommodation of knowledge. Some students with previous life

experience may struggle with trying to assimilate new knowledge into existing cognitive structures. This may be a way for a student to validate their previous life experience as correct or true. A student may perceive it as a threat to realize their previous life experience or medial treatment was atypical, abnormal, or even inappropriate. The student's cognitive resistance may be related to an unwillingness to create a new schema to accommodate new knowledge. This resistance can be a method to protect themselves from a perceived threat in relation to the previous life experience. A student's ability to create new schemes and accommodate new knowledge can be a critical sign for faculty members to monitor progress in learning. Once a student demonstrates this ability and understands why new knowledge can not be assimilated into previous knowledge, faculty members could view this as a turning point in the learning process for nontraditional students. Once the student has experienced the use of cognitive accommodation, the student may begin to understand how their previous life experience knowledge can be either assimilated or accommodated as they learn new knowledge. This cognitive ability, if recognized by the student and discussed with the faculty member, may be able to minimize any perceived threats. This in turn may assist students to experience less cognitive resistance as perceived threats are diffused. The faculty member is a critical factor for the student to understand the process of assimilation and accommodation. If done in an objective and supportive manner, it should foster a positive relationship between student and faculty. Students could then view faculty members as a support in understanding new knowledge and not an overt threat to self. This benefit may impact the finding that student's tended to not share previous life or work experiences with

faculty members. The enhancement of the trust relationship between the student and the faculty member can provide the teacher with more insights into future areas of cognitive resistance with individual students.

Self Awareness

Nontraditional students were found to demonstrate a strong self awareness of meta-cognitive skills. Students were able to independently identify strengths and weakness in personal learning strategies. When poor grades resulted, students described alternate plans to enhance study skills based on personal strengths. It is interesting to note that in several scenarios, student knew what they should be doing to perform academically, but did not follow through with them. Family issues, hours at work, and other distractions were cited as factors in not utilizing the strategies which had been used successfully in the past. Further research in factors which prevent students from utilizing known effective learning strategies could be explored further. This research could be helpful to students early in a program to prevent a decline in academic performance.

The community college used in this study had several avenues for students to improve study skills. Only one student described taking a study skill course prior to entering the nursing program and felt it was extremely helpful. It is unknown if this was a requirement for admission, based on advisement or a personal decision by the student. When this student had a decline in academic performance, a clear benefit was noted by her ability to identify a lapse in the use of effective study skills. Individual nursing programs may consider the addition of a study skills type course for nontraditional

students based on admission requirements or other criteria. This proactive approach may be a factor in supporting the student to succeed academically.

Another resource at this college was the availability of an academic resource center to provide individual academic assistance and evaluation of study skills. Although most students were aware of its existence on campus, only one out of ten interviewed students had utilized the services. It was interesting to note that this was the same student who had taken the study skills course. It appears that students tended to not use this type of academic resource until a decline in academic performance occurred. Unfortunately, this can be a fatal error in a nursing program. Most nursing programs are set up in a linear format and each course must be taken in a defined sequence to progress through the curriculum. In most cases, a student may be required to wait up to one year before the same course is offered again. In some nursing programs, a single course failure can result in dismissal from the program.

Intentional Conceptual Change theory places a strong emphasis on the student's self awareness of meta-cognitive skills as well as motivation and goal orientation. Students in this study verbalized high levels of motivation to learn. Students seemed very eager and anxious to learn. Students independently sought out learning opportunities during clinical based on their interests and learning needs. These findings were supported by triangulation with the faculty interview data. Overall, faculty members viewed nontraditional student as motivated to learn and active in identifying learning needs.

Entering a nursing program is a highly specific career path which demonstrates a student's goal orientation. It was interesting to note that several students identified very specific areas in nursing as a career goal such as Maternity nursing or Long term care. Other students described specific plans to purse graduate nursing education in anesthesia, teaching, and clinical practice.

High levels of personal motivation were noted during the discussion of previous life experience. Since a large number of the original sample of fifty-four students had prior healthcare experience, it seems these students chose nursing as a very specific career path. Also, the large number of students who had one or more non-healthcare work experiences prior to a healthcare work experience can be a positive indicator of the individual's high level of motivation and goal orientation toward their nursing education.

Factors Which Impact Learning

The effect of previous life experience on cognitive structure changes and knowledge acquisition can best be described by listing the factors which impact learning identified in this study. Barriers to learning and factors to facilitate learning can be outlined from the qualitative findings to provide clear guidelines for educators with nontraditional nursing students. These findings are presented in Table 8.

Summary

The findings of this study have important implications for nursing education regarding nontraditional nursing students and the effect their previous life experience has

on cognitive structure changes and knowledge acquisition.

This study finds nontraditional nursing students in this community college have a broad and varied background of healthcare and non-healthcare work experience with little to no college education. This signals the need for strong academic support services and advisement to support these students throughout their education. Nontraditional students with years of work experience, have a diverse and rich life experience which can be accessed by faculty to foster role transition into nursing. This suggests that nontraditional nursing students need more individual faculty member interaction to assist them in overcoming specific hurdles which may arise from their previous education, work, and life experience.

In reviewing the experiences of these students, this study found a broad and varied range of exposure to healthcare experiences. Nontraditional students are not 'blank slates' but bring a complex array of experiences which need to be addressed as cognitive and emotional conflict develop throughout the curriculum. Although academic ability had a moderate influence on academic performance, the impact of experience can yield emotional or cognitive conflict which can impede learning.

Caring in nontraditional students does not appear to be directly related to previous life experience but may be related to their maturity, adult development or the general aspects of their previous life experiences.

Nontraditional students may have unrealistic expectations about their abilities which result in reality shock, emotional and cognitive conflict. Nontraditional students frequently have misperceptions of faculty expectations of their clinical performance due

Table 8

Factors Impacting Learning Among Nontraditional Nursing Students

Conditions	Barriers To Learning	Factors Facilitating Learning
Cognition:		
Knowledge Conflict	Unresolved	Resolved
Emotional Conflict	Unresolved	Resolved
Cognitive Resistance	Unresolve	Resolved
Use of Academic Support Services	Limited or none	Prior study skills course and/or use of Academic Support
Ability to correlate theory to clinical	Limited ability	Demonstrates with varying levels of Faculty assistance
Meta-Cognition:		
Self awareness of personal cognitive skills and strategies	Limited or no self awareness	Verbalizes personal cognitive skills and strategies
Affective Characteristics:		
Use of self reflection	Resists reflection on changes in current knowledge	Willing to reflect on changes in current knowledge
Goals	Unclear	Clear
Motivation	Behavior reflects an unmotivated attitude	Behavior reflects a motivated attitude

to their previous life experiences. All these expectation and misperceptions can have a negative impact on student learning if not identified and clarified throughout the term. Clarification of expectation throughout the learning process should become a large part of teaching nontraditional nursing students.

A pattern of nontraditional student role transition from adult with previous life experience adapting to the role of student nurse emerged.   Initial period of overconfidence with unrealistic expectations is followed by a period of disillusionment and concludes with resolution and acceptance of the depth of new knowledge. If future research establishes this phenomenon, nursing faculty can begin to appreciate this pattern as an aspect of role transition for nontraditional students and foster their growth through the cycle.

Emotional conflict is a pervasive aspect during learning among nontraditional nursing students due to previous life experience. Nursing faculty play a critical role in the resolution of this conflict to support learning. Faculty development and mentoring is needed to support faculty in this area.

As a result of emotional and cognitive conflict resolution, nontraditional students can undergo a personal transformation by gaining perspective on negative or misunderstood previous life experiences. The resolution of these conflicts can foster a deeper, multidimensional learning experience for the student

In general, most students were able to change existing cognitive structure easily based on their high level of motivation, strong goal orientation and awareness of meta-cognitive skills, but cognitive resistance can occur to prevent learning. Faculty need to have a clear understanding of cognitive resistance as an emotional response by

the student.   Faculty members need effective strategies and mentoring to assist students

in overcoming cognitive resistance.

Nontraditional students demonstrate self awareness of their meta-cognition

processes, but do not access academic support services until an academic decline. This

indicates the importance of study skills courses and academic resource center referrals

with these students with limited college experience.

Nontraditional nursing students offer a wide range of challenges and opportunities

to enhance their learning due to their previous life experience. The highly motivated,

actively engaged, and goal oriented nontraditional student requires a more interactive

and individualized approach by faculty members to be successful in their nursing education.

Implications for Future Research

The results of this study have strong implications for future research into the area of

nontraditional nursing students and their previous life experience.   Research into the

characteristics of nontraditional students should be ongoing process. Identifying the trends

and characteristics of nontraditional nursing students can impact recruitment, advisement,

establishment of academic support services, and teaching strategies.

With students starting their nursing education with a broad and varied previous life and work

experience, differences in academic and clinical performance should be examined in light of

these variables.

The previous life experience of nontraditional students continues to need further

investigation. More objective methods of previous life experience need to be developed to
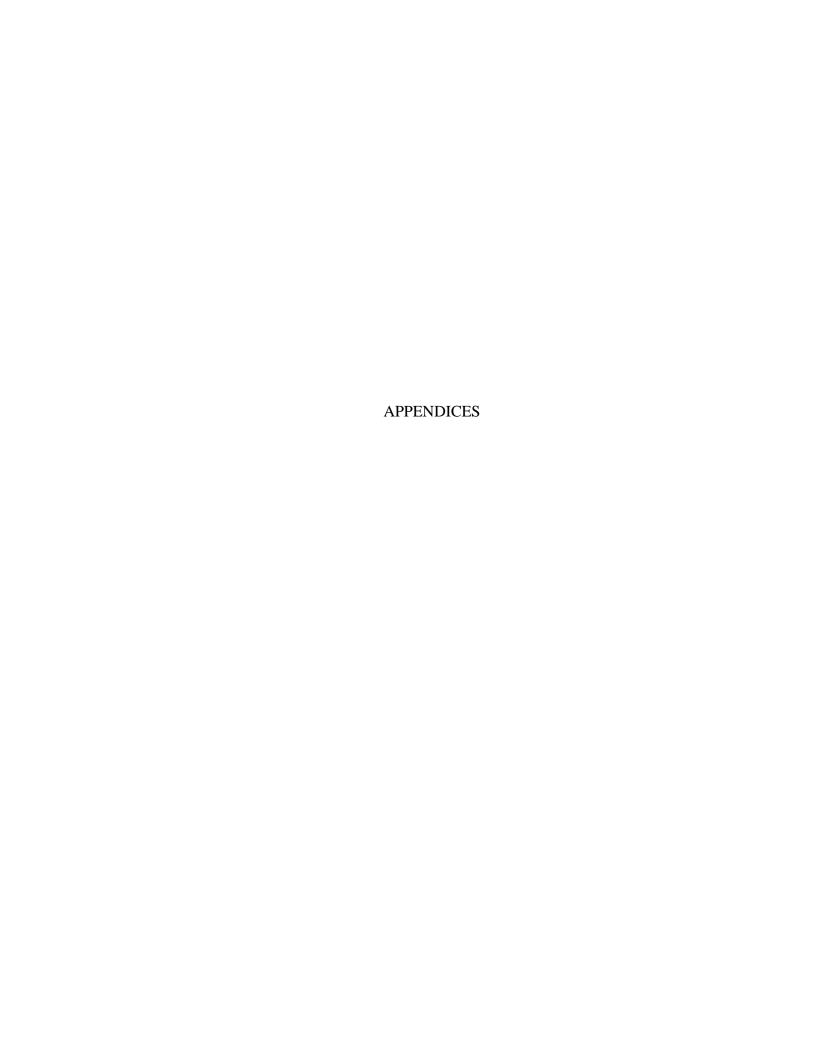
accurately capture student experiences. This includes further study into the possible effect of differences and similarities between personal previous life experience, healthcare work experience and previous life experience with others on learning and cognitive restructuring. Both positive and negative previous life experiences should be explored to determine if differences exist regarding their impact on learning, role adaptation and cognitive resistance. This study suggests the need for further research on the impact of highly specific previous life experience on role transition, caring behaviors, academic, and clinical performance in those areas.

The relationship between faculty members and nontraditional nursing students should be further examined. Changes in student perception of faculty expectations should be studied over time to determine patterns and characteristics.   Student responses of cognitive resistance and unrealistic perceptions of ability need to be examined individually and within the faculty/student relationship.

Student misperceptions of their academic and clinical ability require further study to describe the process of role adaptation into realistic expectations and accurate self evaluation. Studies of student expectations could extend into the student's ability to manage emotional conflict in clinical. The factors found to be related to the resolution of emotional conflict in clinical need to be studied with larger samples sizes to determine reliability and validity.

Finally, further examination of personal and professional transformation as an aspect of role transition may yield a wealth of knowledge to meet the changing needs of nontraditional nursing students.

These suggestions for future research can further development an understanding of nontraditional nursing students as well as the effect of previous life experience on cognitive structure changes and learning. This field of research is yet to be developed and remains largely an untapped resource of knowledge in the field of nursing education.

APPENDICES

APPENDIX A

SUPPLEMENTARY TABLES

Table 6

Types and Frequency of Personal Previous Healthcare Life Experience   *N* = 54

Types	Frequency
Cancer	3
Musculoskeletal/Orthopedic	6
Cardiovascular	2
Respiratory	18
Gastrointestinal	12
Endocrine/Metabolic	4
Renal/Urinary	8
Neurological	10
Mental Health/Psychiatric	9
Trauma	4
Surgery	17
Emergency Room	18
Obstetric/Gynecological	42
Infertility	4
Miscarriage	8

Table 7

Specific Personal Previous Healthcare Experience by Type

Type	Specific Personal Experience
Cancer	Cervical, Uterine, Skin
Musculoskeletal/Orthopedic	Scoliosis, Sciatica
Cardiovascular	Hypertension
Respiratory	Asthma, Bronchitis, Pneumonia
Gastrointestinal	Irritable Bowel Syndrome, Chron's Disease, Gastric Reflux
Endocrine/Metabolic	Thyroid Disease
Renal/Urinary	Urinary Tract Infection, Kidney Stones
Neurological	Migraines, Seizures
Mental Health/Psychiatric	Depression, Anxiety, Panic Attack, Anorexia, Drug and Alcohol Addiction
Trauma	Motor Vehicle Accidents, Burns
Surgery	Appendectomy, Tonsillectomy, Hysterectomy, Caesarian Section, Gall Bladder Removal
Emergency Room	Acute Abdominal Pain, Stitches, Fractures, Kidney Stones, Panic Attack, Anaphylactic Reaction, Motor Vehicle Accident
Obstetric/Gynecological	Pregnancy, Labor and Delivery, Infertility, Miscarriage, Endometriosis, Ovarian Cysts

APPENDIX B

SURVEY

STUDENT SURVEY

This is a survey to explore the types and amount of prior life experience in health and illness among nontraditional nursing students. Part I requests basic demographic information. By filling out this survey and submitting it to the researcher, you are consenting to provide this information. Confidentiality will be maintained by the use of a Personal Identification Number you select to represent your identity.

Part I:

Personal Identification Number_____

Age:_____

Gender:
Female ____
Male   _____

Marital Status:
Single never married_____
Single & living with Significant Other____
Married_____
Divorced _____
Separated _____
Re-Married _____
Widowed_____

Previous Pregnancy History:
Number of Pregnancies: _____

Number of Live Births: _____

Number of children living with you:_____

Your age at each child's birth:_____

_____

_____

_____

_____

Highest Prior Education Level:
Nursing_____
Other_____

Please describe any previous college degrees with major or technical school education and date of completion, certifications, course work in other disciplines:

_____

_____

_____

Please describe any previous job experience since high school and note length of time in each job:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

PART II
This section of the survey has to do with any previous life experience you have had in the area specified.   Previous life experience can include things that have occurred to you, a family member, friend, distant relative, co–worker etc. Please describe as briefly as possible your previous life experience with health care/illness/hospitalization including any information regarding timeframe.

For example:

1. When I was 13, my best friend's father died of colon cancer. He had been sick for about 6 months and then died.

2. I had my gall bladder out when I was 39. It was a day surgery and had no complications. I had some abdominal pain and nausea on and off for about 6 months before the surgery.

3. I had a miscarriage at 12 weeks when I was 22. Then, I used fertility pills for 8 months before I got pregnant. I had no problems with the pregnancy or delivery and my son was born healthy. I breastfed him for 6 months.

4. When my son was 7, he was seen in the Emergency Room for a fractured arm after he fell off his bike. I remember that we waited for 14 hours to see the Doctor, get pain medicine and get the cast applied.

5. My co-worker 's husband was diagnosed with TB and had to take medicine for a year. This happened about 5 years ago when I was 23. I did not know you could still get TB these days.

6. When I was 17, my girlfriend (also 17) attempted suicide and was admitted to a Mental Hospital. She was treated for depression and anorexia for 2 months and released. She has been fine since then.

    As you can see, you will probably only remember things that are significant to you. They may or may not be things that you still think about today, or have thought about since your started your nursing courses.

Please list and describe any previous life experience in the following areas including timeframe.   Then, please choose the descriptor that best describes the amount of prior life experience you have had in each area:

Death (sudden, anticipated etc…)

Regarding death, the amount of experience I have had is:

0	1	2	3
none	small	moderate	large

Cancer (location, treatment, outcome etc…)

Regarding cancer, the amount of prior life experience I have had is:

0	1	2	3
none	small	moderate	large

Musculoskeletal problems: (scoliosis, hip/knee replacement, arthritis etc…)

Regarding Musculoskeletal problems, the amount of prior life experience I have had is:

0	1	2	3
none	small	moderate	large

Cardiovascular problems: (HTN, MI, open heart surgery etc…)

Regarding Cardiovascular problems, the amount of prior life experience I have had is:

0	1	2	3
none	small	moderate	large

_____

Respiratory problems: (pneumonia, COPD, attempts to quit smoking…)

Regarding Respiratory problems, the amount of prior life experience I have had is:

0	1	2	3
none	small	moderate	large

_____

GI problems: (ulcers, failure to thrive, Crohn's disease etc…)

Regarding GI problems, the amount of prior life experience I have had is:

0	1	2	3
none	small	moderate	large

_____

Metabolic/Endocrine problems: (thyroid, diabetes etc…)

Regarding Endocrine/Metabolic problems, the amount of prior life experience I have had is:

0	1	2	3
none	small	moderate	large

Renal/Kidney/Bladder problems: (Dialysis, kidney stones etc…)

Regarding Renal problems, the amount of prior life experience I have had is:

0	1	2	3
none	small	moderate	large

Neurological problems: (seizures, migraines, dementia, Parkinson's etc…)

Regarding Neurological problems, the amount of prior life experience I have had is:

0	1	2	3	none	small
moderate	large				

Mental Health problems: (acute or chronic, hospitalization or out patient treatment, drug and alcohol problems etc…)

Regarding Mental Health problems, the amount of prior life experience I have had is:

0	1	2	3
none	small	moderate	large

_____

Trauma (car accident, falls, burns etc…)

Regarding Trauma, the amount of prior life experience I have had is:

0	1	2	3
none	small	moderate	large

_____

Surgery (scheduled or emergency)

Regarding Surgery, the amount of prior life experience I have had is:

0	1	2	3
none	small	moderate	large

_____

Emergency Room visits

Regarding Emergency Room visits, the amount of prior life experience I have had is:

0	**1**	**2**	**3**
none	**small**	**moderate**	**large**

_____

Maternity/Gynecologic (pregnancy, delivery, breastfeeding, fertility treatment etc…)

Regarding Maternity/Gynecologic issues, the amount of prior life experience I have had is:

0	**1**	**2**	**3**
none	**small**	**moderate**	**large**

_____

Thank You for participating in this research study. Your information will be a valuable component in this investigation for nursing education and practice.

APPENDIX C

STUDENT CONSENT FORM

APPENDIX D

FACULTY CONSENT FORM

Faculty Consent Form

How Do Nontraditional Nursing Students with Prior Life Experience Acquire New Knowledge?

I want to do research on how nontraditional nursing students with prior life experience learn nursing content and skills. I want to do this because nontraditional students have many different previous life experiences in health care which may impact their ability to learn and be successful in a nursing program.

If you agree to participate in this research study as clinical faculty, you will be interviewed and audio taped at the end of the term regarding the learning of selected students. This interview will occur after the submission of final grades in December 2007. In the interest of confidentiality, you will not know the identity of the participants in this study until the interview. The interview will take place in a private office in the Nursing department.

You are free to stop your participation in this research at any time. Referral to the campus student health center will be available if you feel any unusual anxiety, stress or psychological discomfort during this interview.

Confidentiality will be maintained to the limits of the law. Confidentiality may not be maintained if you indicate that you may do harm to yourself or may do/have done harm to others. Interviews and field notes will be transcribed without information regarding the identity of the subjects or the clinical faculty. All data will be kept in a locked file cabinet for 3 years in the Educational Foundations and Special Services department of the College of Education at Kent State University in Kent, Ohio. After 3 years, the transcripts will be destroyed.

If you take part in this project, you may gain insight into the effect that previous life experience may have on nontraditional nursing students learning nursing content and skills. Taking part in this project is entirely up to you, and no one will hold it against you if you decide not to do it. If you take part, you may stop at any time.

If you want to know more about this research project, please call me at 717-838-4322 or my advisor Dr. Christopher Was (330-672-2294). The project has been approved by Kent State University. If you have questions about Kent State University's rules for research, please call Dr. Peter C. Tandy, Acting Vice President and Dean, Division of Research and Graduate Studies (330-672-2704).

You will get a copy of this consent form.

Sincerely,

Pamela A. Meinert MSN, CRNP
Doctoral Candidate
Kent State University

I agree to take part in this project. I know what I will have to do and that I can stop at any time.

_____
Signature   Date

APPENDIX E

AUDIO TAPING CONSENT FORM

AUDIO/VIDEOTAPE CONSENT FORM

I agree to audio taping at Harrisburg Area Community College Lancaster campus in the nursing department in December 2007 at the end of the Fall 2007 term.

_____

 Signature   Date

I have been told that I have the right to hear the audio tapes before they are used. I have decided that I:

____want to hear the tapes   ____do not want to hear the tapes

Sign now below if you do not want to hear the tapes. If you want to hear the tapes, you will be asked to sign after hearing them.

Pamela A. Meinert and other researchers approved by Kent State University <u>may</u> / <u>may not</u> use the tapes made of me. The original tapes or copies may be used for:

_____this research project _____teacher education _____presentation at
                                                         professional meetings

_____

Signature   Date

Address:

APPENDIX F

PERMISSION TO CONDUCT RESEARCH

REFERENCES

REFERENCES

Aanstad, J. (1972). A study of mature women at Santa Fe Junior College: A topical paper. Florida Community Junior College, Inter-institutional Research Council. (ERIC Document Reproduction Service No. ED 057 797)

Astin, H. S. (1976). *Some action of her own.* Lexington, MA: D. C. Heath.

Badenhoop, M. S., & Johansen, M. K. (1980). Do reentry women have special needs? *Psychology of Women Quarterly, 4*(4), 591-595.

Beiter, C., & Scardamalia, M. (1989). Intentional learning as a goal of instruction. In L. B. Resnick (Ed.), *Knowing, learning and instruction: Essays in honour of Robert Glaser (pp. 361-392). Hillsdale, NJ: Lawrence Erlbaum Associates.*

Bean, J. P., & Metzner, B. S. (1985). A conceptual model of nontraditional student attrition. *Review of Educational Research*, *55*(4), 485-540.

Beader, H., & Carrea, N. (1988). The effects of andragogical teacher training on adult students' attendance and evaluation of their teachers. *Adult Education Quarterly, 38,* 75-87.

Beck, C. & Kosnik, C. (2006). *Innovations in teacher education: A social constructivist approach.* New York: State University of New York Press.

Belinsky, M. F., Clinchy, B. M., Goldberger, M. R. and Tarule, J. M. (1986). *Women's Ways of Knowing: the development of self, voice and mind.* New York: Basic Books.

Berne, E. (1964). *Games people play*. New York: Grove Press.

Bevis, E. M. (1973). Role conception and continuing learning activities of neophyte collegiate nurses. (Doctoral dissertation, University of Chicago, 1972). *Comprehensive Dissertation Index, 33*, 369.

Bradby, M. (1990). Status passage into nursing: Another view of the process of socialization in nursing. *Journal of Advanced Nursing, 15,* 1220-1225.

Braxton, J., Brier, E., & Hossler, D. (1988). The influence of student problems on student withdrawal decisions: An autopsy on "autopsy" studies. *Research in Higher Education, 28*(3), 241-253.

Brier, J.M..& Hossler, D. (1988). The influence of student problems on student withdrawal decisions: An autopsy on "Autopsy" studies. *Research in Higher Education, 28*(3), 241-253.

Brodzinski, F. R. (1980). Adult learner – The new majority: A demographic reality. *New Directions for Student Services: Proving Service for the Adult Learner. 11*, 1-6.

Bueche, M. N. (1986). Re-entry women in baccalaureate nursing programs: The achievement of selected developmental tasks. *Journal of Nursing Education, 25*(l), 15-19.

Cates, B. (2001). Writing case studies: Construction an understanding of student and classroom. In J. Brown and A. Adams (Eds.), *Constructivist teaching strategies: Projects in teacher education* (pp. 3-22). Springfield, Illinois: Charles C. Thomas Publishing.

Chi, M. T. (1992). Conceptual change within and across ontological categories. Examples from learning and discovery in science. In R.N. Gidve (Ed.), *Minnesota Studies in the Philosophy of Science: Vol XV. Cognitive models of science*. (pp. 120-186). Minneapolis, MN: University of Minnesota Press.

Chickering, A. W. (1969). *Education and identity*. San Francisco: Jossey-Bass.

Christman, L. (1988, April/May). Men in nursing. *Imprint,* 61-67.

Clarke, M. (1986). Action and reflection: practice and theory in nursing. *Journal of Advanced Nursing,* 11, 3-11.

Clements, K. (1974). Emotional characteristics of mature women students in education. Eastfield College, Dallas County Community College District, Paper presented at meeting of the American Educational Research Association, Chicago. (ERIC Document Reproduction Service No. ED 087980)

Cobern , W. (1993). Contexual constructivism: The impact of culture on the learning and teaching of science. In K. Tobin (Ed.), *The practice of constructivism in science education* (pp.51-69). Washington: AAAS Press.

Coffey, A., & Atkinson, P. (1996). Making sense of qualitative data: Complementary research strategies. Thousand Oakes, CA: Sage.

Cohen, M., Kahn, D., and Steeves, R. (2000). Hermeneutic phenomenological research. A practical guide for nurse researchers. Thousand Oakes, CA: Sage.

Colaizzi, P. (1973). *Reflection and research in psychology: a phenomenological study of learning.* Dubuque, Iowa: Kendall/Hunt.

Conti, G., & Welborn, R. (1986). Teaching-learning styles and the adult learner. *Life-Long Learning, 9,* 20-24.

Council of Hospital-Based Schools of Nursing of the Hospital Association of America. (March, 21, 1989). Minutes of the Executive Committee. Camp Hill, PA.

Crook, J. (1985). A validation study of a self-directed learning readiness scale. *Journal of Nursing Education, 24* (7) , 274-279.

Cross, K. P. (1981). *Adults as learners: Increasing participation and facilitating learning.* San Francisco: Jossey-Bass.

Cust, J. (1995). Recent cognitive perspectives on learning-implications for nurse education. *Nurse Education Today, 15,* 280-290.

Derrida, J. (1990). *Du droit a la philosophie.* Paris: Galilee.

Dewey, J. (1916). *Democracy and education.* New York: Macmillan.

Dewey, J. (1929/1960). *The quest for certainty.* New York: Capricorn.

Dewey, J. (1934/1980). *Art as experience.* New York: Perigee.

Dewey, J. (1938). *Experience and education.* New York: Collier-Macmillan.

Dinitz, S., Angrist, S., Lefton, M., & Pasamanick, B. (1966). Instrumental role expectations and post hospital performance of female mental patients. In B. Biddle & E. Thomas (Eds.), *Role theory: Concepts and research.* New York: John Wiley and Sons.

Dole, J. & Sinatra, G. (1998). Reconceptualizing change in the cognitive construction of knowledge. *Educational Psychologist, 33,* 109-128.

Donmoyer, R. (1990). Generalizability and the single-case study. In E. Eisner & A. Peshkin (Eds.), *Qualitative inquiry in education: The continuing debate* (pp. 175-200). New York: Teachers College Press.

Doty, B. A. (1970). Predictions of teaching effectiveness of women who begin teaching after age thirty-five. *Journal of Teacher Education.* 21, 519-525.

Dunkelberger, J. E., & Aadland, S. C., (1984). Expectation and attainment of nursing careers. *Nursing Research, 33*(4), 235-240.

Erikson, E. H. (1963). Childhood and society. New York: W. W. Norton & Co., Inc.

Ferrell, B. (1978). Attitudes toward learning styles and self-direction of ADN students. *Journal of Nursing Education, 17*(2), 19-22.

Flanagan, J. (1954). The critical incident technique. *Psychological Bulletin,* 31, 327-358.

Flannery, D., & Apps, J. (1987). Characteristics and problems of older returning students. College of Agricultural & Life Sciences Research Report. Washington, DC: Department of Agriculture.

Forsyth, P. B., & Danisiewicz, T. J. (1985). *Toward a theory of professionalism. Work and Occupations, 12*(1), 59-76.

Foucault, M. (1998). *Michael Foucault: Aesthetics, method and epistemology.* Ed. J. D. Faubion. New York: The New Press

Fox, D., Diamond, L., Walsh, R., & Knophf, L. (1965). *Satisfying and stressful situations in basic programs in nursing education.* New York: Bureau of publications, Teachers College, Columbia University.

Gagne, R. M. (1965). *Conditions of Learning,* first ed. New York: Holt, Rinehart and Winston.

Gardner, H. (1983). *Frames of Mind: the theory of multiple intelligence.* New York: Basic Books.

George, V. D., & Owen L. (1983). Personality attributes of RN students and female college students. *The Journal of Psychology, 115*, 221-231.

Giorgi, A. (1986a). Sketch of a psychological phenomenological method. In A. Giorgi (Ed.), *Phenomenological and psychological research* (pp. 8-22). Pittsburgh, PA: Duquesne University Press.

Giorgi, A. (1986b). The phenomenological psychology of learning and the verbal learning tradition.. In A. Giorgi (Ed.), *Phenomenological and psychological research* (pp. 23-85). Pittsburgh, PA: Duquesne University Press.

Glaser B. (1965). The constant comparative method of qualitative analysis. *Social Problems, 12*, 436-445.

Goetz, J., & LeCompte, M. (1984). *Ethnography and qualitative design in educational research*. San Diego, CA; Academic Press.

Gould, R. L. (1972). The phases of adult life: A study in developmental psychology. *American Journal of Psychiatry, 129*, 521-531.

Gould, R. L. (1978). *Transformations: Growth and change in adult life*. New York: Simon & Schuster.

Grassi-Morris, N., & Morris, P. (1981). Hopes and fears: The attitudes of freshmen nursing students. *Journal of Nursing Education, 20*(6), 9-17.

Green, C. P. (1987). Multiple role women: The real world of the mature RN learner. *Journal of Nursing Education, 26*(7), 266-271.

Green, M. (1974). Cognition, consciousness, and curriculum. In W. Pinar (Ed.), *Heightened consciousness, cultural revolution, and curriculum theory.* (pp. 66-84). Berkeley, CA: McCutchan.

Green, M. (1990). The tensions and passions of caring. In M. Leninger & J. Watson (Eds.), *The caring imperative in education.* (pp. 29-43). National League of Nursing, New York.

Guba, E. G., & Lincoln, Y. S. (1982).Epistemological and methodological bases of naturalistic inquiry. *Education communications and Technology Journal, 4*(30).

Guba, E. G., & Lincoln, Y. S. (1989). *Fourth generation evaluation.* Newbury Park, CA: Sage.

Guglielmino, L. M. (1977). Development of the self-directed learning readiness scale. (Doctoral dissertation, University of Georgia, 1977), University of Microfilm International, Ann Arbor, MI.

Halfter, I. (1962). The comparative achievement of young and old. *Journal of the National Association of Women Deans and Counselors, 25*, 60-67.

Hall, R. H. (1968). Professionalism and bureaucratization. *American Sociological Review, 34*, 92-104.

Hallenbeck, W. C. Reflections of an adult educator. (Spring 1966). *Adult Educator, 16,* 169.

Hamburg, D. (1974). Coping behaviors in life threatening circumstances. *Psychotherapy Psychosomatics,* 23, 13-15.

Hanson, G. R., & Lenning, 0. T. (1973). Differences in characteristics and outlooks of men and women college students at various age levels. Cleveland: OH. Paper presented at the meeting of the American College Personnel Association. (ERIC Documentation Reproduction Service No. ED 078 840)

Havighurst, R. J. (1952). *Human development and education.* New York: Longmans, Green.

Havighurst, R. J. (1972). *Developmental tasks and education* (3rd ed.). New York: David McKay Co., Inc.

Hight, L. J. (1996). *A comparative study of anxiety levels in traditional and nontraditional undergraduate nursing students in Tennessee*. (Doctoral Dissertation, University of Memphis, 1996).

Hodgkinson, H. L. (1983). Coming to college - A demographic portrait of students in the 1990's. *Academe, 2*, 13-20.

Jeffreys, M. R. (1998) Predicting nontraditional student retention and academic achievement. *Nurse Educator, 23*(1), 42-48.

Kalist, D. E. (2003). The supply of nursing school students. *Nursing and Health Policy Review*, 2(1), 7-24.

King, J. E. (1986). A comparative study of adult developmental patterns of RN and generic students in a baccalaureate nursing program. *Journal of Nursing Education, 25*(9), 366-371.

King, J. E. (1988). Differences between RN and generic students and the impact on the educational process. *Journal of Nursing Education, 27*(3), 131-135.

King, P. M. and Kitchener, K. S. (1994). *Developing Reflective Judgment: understanding and promoting intellectual growth and critical thinking in adolescents and adults.* San Francisco, CA: Jossey-Bass.

Kitchener, K. S. (1982). Human development and the college campus: Sequences and tasks. In G.R. Hanson (Ed.). *Measuring student development. New Directions for Student Services, no. 20.* San Francisco: Jossey-Bass.

Knowles, M. S. (1962). *The adult education movement in the United States*. New York: Holt, Rinehart, & Winston.

Knowles, M. S. (1968). Andragogy, not pedagogy. *Adult Leadership, 16*(10), 350-386.

Knowles, M. S. (1970). *The modern practice of adult education: Andragogy versus pedagogy.* New York: Cambridge University Press.

Knowles, M.S. (1980). *The modern practice of adult education: From Pedagogy to andragogy.* (2nd ed.) New York: Cambridge Books.

Knowles, M. S. (1984). Introduction: The art and science of helping adults learn. In M. S. Knowles & Associates, *Androgogy in action.* San Francisco: Jossey-Bass.

Kozulin, A. (1985). Vygotsky in context. In L. Vygotsky *Thought and language (pp. xi-lvi).* Cambridge: MIT Press.

Kramer, M. (1969). The new graduate speaks again. *American Journal of Nursing, 16*(4), 17-20.

Kushnir, T. (1986). Stress and social facilitation: The effects of the presence of an instructor on student nurses' behavior. *Journal of Advanced Nursing, 11,* 13-19.

Lauder, W., & Cuthbertson, P. (1998). Course-related family and financial problems of mature nursing students. *Nurse Education Today, 18*(5), 419-425

Lazarus, R. (1976). *Patterns of adjustment*. New York: McGraw Hill.

Lee, E. J. (1988). Analysis of coping methods reported by returning RNs. *Journal Of Nursing Education, 27*(7), 309-313.

Lemke, J. L. (1997). Cognition, context and learning: A social semiotic perspective. In D. Kirshner and J. Whitson (Eds.), *Situated cognition. Social, semiotic and psychological perspectives* (pp. 37-55). Mahwah, NJ: Lawrence Erlbaum Associates.

Leninger,l M. & Watson, J. (Eds.),(1990). The caring imperative in education. Pub. No. 41-2308. New York: National League of Nursing.

Levine, A., & Associates. (1990). *Shaping higher education's future: Demographic realities and opportunities, 1990-2000.* San Francisco: Jossey-Bass.

Levinson, D. J., Darrow, D. N., Klein, E. B., Levinson, M. H., & McKee, B. (1978). *The seasons of a man's life*. New York: Alfred A. Knopf, Inc.

Limon-Luque, M. (2002). The role of domain-specific knowledge in intentional conceptual change. In M. Sinatra & M. Pintrich (Eds.), *Intentional Conceptual Change* (pp.133-172).

Linares, A. Z. 91989) A comparative study of learning characteristics of RN and generic students. *Journal of Nursing Education, 28*(8), 354-360.

Loesch, T., & Foley, R. (1988). Learning preference differences among adults in traditional and nontraditional baccalaureate programs. *Adult Education Quarterly, 38*, 224-233.

Loevinger, J. (1976). *Ego development.* San Francisco: Jossey-Bass.

Long, H. B. (1971). *Are they ever too old to learn?* Englewood Cliffs: Prentice Hall.

Lowenthal, M. F., Thurnber, M., & Chiribaga, M. (1975). *Four stages of life: A comparative study of women and men facing transitions.* San Francisco: Jossey-Bass.

Peters, M. (2000). Does constructivist epistemology have a place in nursing education? *Journal of Nursing Education,* 39(4), 166-172

Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In *Handbook of Self-Regulation,* eds. M Boekaerts, P. R. Pintrich and M. Zeidner, San Diego, CA: Academic Press, 341-502.

Pintrich, P. R., Marx, R. W., & Boyle, R. A. (1993). Beyond cold conceptual change: The role of motivational beliefs and classroom contextual factors in the process of conceptual change. *Review of Educational Research, 63,* 167-199.

Posner, G., Strike, K., Hewson, P., & Gertzog, W. (1982). Accommodation of a scientific conception: Towards a theory of conceptual change. *Science Education, 67*(4), 489-508.

Marriner, A. (1986), Marketing weekend college for women nursing students. J*ournal Of Nursing Education, 25*(8), 313.

Mashburn, P. (1985). Nontraditional nursing students in a part-time evening/weekend diploma program. *Dissertation Abstracts International, 50,* 2846.

McMillan, H., & James, H. (1992). *Educational research: Fundamentals for the consumer.* New York: Harper Collins.

Meinert, P. A. (1989). *Adult development and lifestyle characteristics of traditional and nontraditional nursing students*. University of Pittsburgh: Unpublished master's thesis.

Merritt, S. L. (1983). Learning styles preference of baccalaureate nursing students. *Nursing Research, 32*, 367-372.

Metzner, B. S., &Bean, J. P. (1987). The estimation of a conceptual model of nontraditional undergraduate attrition. *Research in Higher Education, 27*(1), 15-38.

Moseley, D., Elliott, J., Gregson, M. and Higgins, S. (2005). Thinking skills frameworks for use in education and training. *British Educational Research Journal,* 17(3), 367-390.
.
Murray, L. M., & Morris, D. R. (1982). Professional autonomy among senior nursing students in diploma, associate degree, and baccalaureate nursing programs. *Nursing Research, 31*(5), 311-313.

National Center for Education Statistics. (2006). Digest of Education Statistics, 2005 (NCES 2006-005), Chapter 3.

Neisser, U. (1976). *Cognition and reality. Principles and implications of cognitive psychology.* San Francisco: Freeman and Company.

Nelms, T. (1990). The lived experience of nursing education: A phenomenological study. In M. Leninger & J. Watson (Eds.), *The caring imperative in education. Pub. N. 41-2308,* New York: National league for Nursing.

Nevada Nurses Association.(2002). Enrollments rise at U.S. nursing colleges and universities ending a six-year period of decline. *Nevada RNformation, 11*(2). Retrieved May 30, 2007, from http://gateway.ut.ovid.com/gw1/ovidweb.cgi

Noddings, N. (1984). *Caring: A feminist ethic.* Berkeley: University of California Press.

Oliver, D. H. (1985). The relationship of selected admission criteria to the academic success of associate degree nursing students. *Journal of Nursing Education, 24*(5), 197-206.

Pekala, R. (1991). *Quantifying consciousness. An empirical approach.* New York: Plenum Press.

Perry, A. E. (1986). Reentry women: Nursing's challenge. *Nurse Educator, 11*(3), 13-15.

Phillips, D. (1995). The good, the bad and the ugly: The many faces of constructivism. *Educational Researcher, 24*(7), 5-12.

Piaget, J. (1932). *The moral judgment of the child.* London: Routledge & Kegan Paul.

Piaget, J. (1959). *The Language and Thought of the Child,* London: Routledge and Kegan Paul.

Piaget, J. (1969). *Judgment and Reasoning of the Child.* London: Routledge and Kegan Paul.

Piaget, J. (1971). *Biology and Knowledge. An Essay on the Relations between Organic Regulations and Cognitive Processes.* Chicago: University of Chicago Press.

Prince, J. S., Miller, T. K., & Winston, R. B., Jr. (1974). *Student developmental task inventory.* Athens, GA: Student Developmental Associates.

Rebellion, R. J. (1996). *Nontraditional students in higher education: Satisfaction with the role of student and its impact on life satisfaction.* Kent State University: Unpublished doctoral dissertation.

Richardson, V. (Ed.) (1997). *Constructivist teacher education: Building a world of new understandings.* London: Falmer.

Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context.* New York: Oxford University Press.

Rolfe, G. (1996). *Closing the theory practice gap: A new paradigm for nursing.* Oxford:Butterworth-Heinemann.

Rorty, R. (1985). Postmodern bourgeois liberalism. In R. Hollinger (Ed.), *Hermeneutics and praxis* (pp. 214-21). Notre Dame, IN: University of Notre Dame Press.

Rorty, R. (1989). *Contingency, irony, & solidarity.* Cambridge, UK: Cambridge University Press.

Rosenblum, S., & Darkenwald, G. (1983). Effects of adult learners' participation in course planning on achievement and satisfaction. *Adult Education Quarterly, 33*, 147-153.

Rosendahl, P. (1974). Self-Direction for Learners: An Andragogic Approach to Nursing Education. *Nursing Forum, 13*, 137-146.

Ross, J. M. (1989, March). *Critical teaching behaviors as perceived by adult undergraduates.* Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

Russell, J. M. (1990). Relationships among preference for education structure, self-directed learning, instructional methods and achievement. *Journal of Professional Nursing, 6*, 86-93.

Santrock, J. W. (2001). *Educational psychology.* Boston, MA: McGraw-Hill

Schlossberg, N. K. (1981). A model of analyzing human adaptation to transition. *Counseling Psychologist, 9*(2), 2-18.

Schnotz, W., Vosniadou, S., & Carretero, M.. (1999). *New perspectives on conceptual change.* Amsterdam, The Netherlands: Pergamon.
.
Schon, D. (1983). *The reflective practitioner: How professionals think in action.* New York: Basic Books.

Schram, T. H. (2006) *Conceptualizing and proposing qualitative research.* (2nd ed.). Upper Saddle River, New Jersey: Merrill Prentice Hall.

Seidl, A. H., & Sauter, D. (1990). The new non-traditional student in nursing. *Journal of Nursing Education, 29*(1), 13-19.

Shanahan, M. (2000). Being that bit older: Mature students' experience of university and healthcare education. *Occupational therapy International, 7*(3), 153-163.

Shane, D. L. (1980). The returning to school syndrome. *Nursing80, 6*, 86-88.

Sheehy, G. (1974). *Passages: Predictable crises of adult life.* New York: Dutton.

Shelton, E. N. (2000). *Academic self-efficacy and perceived faculty support as predictors of persistence and academic performance in nontraditional associate degree nursing students.* (Doctoral Dissertation, University of Connecticut, 1990).

Shortridge, L. M. (1977). *Attitudes of freshman and senior baccalaureate nursing students toward professional behaviors.* Unpublished doctoral dissertation. Columbia University Teachers College, New York.

Sidle, A., Moos, R., Adams, J., & Cody, P. (1969). Development of a coping scale. *Archives of General Psychiatry, 20,* 226-232.

Sinatra, G. M. & Pintrich, P. R. (Eds.). (2003). *Intentional conceptual change.* Mahwah, NJ: L. Erlbaum.

Spouse, J. (2000). An impossible dream? Images of nursing held by pre-registration students and their effect on sustaining motivation to become nurses. *Journal of Advanced Nursing, 32*(3), 730-739.

St. Julian, J. (1997). Explaining learning: The research trajectory of situated cognition and the implications of connectionism. In D. Kirshner and J. Whitson (Eds.), *Situated cognition. Social semiotic and psychological perspectives* (pp. 261-279). Mahwah, NJ: Lawrence Erlbaum Associates.

Streubert, H. (1979). A description of clinical experience as perceived by clinical nursing educators. *Dissertation Abstracts International, 50,* 906.

Stonewater, B. B. (1987). The second edition of the Student Developmental Task Inventory and sex differences: A factor analysis. *Journal of College Student Personnel, 28,* 365-369.

Stonewater, J. D., Daniels, M. H., & Heischmidt, K. (1986). The reliability and validity of the Student Developmental Task Inventory-2: A pilot study. *Journal of College Student Personnel, 27,* 70-74.

Strauss, A. (1966). Coaching. In B. Biddle & E. Thomas (Eds.) *Role theory: Concepts and research.* New York: John Wiley and Sons.

Strauss, A., & Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques.* Newbury Park, CA: Sage.

Strauss, A., & Corbin, J. (1998). Grounded Theory Methodology: An Overview. pp. 158-183 in *Strategies of Qualitative inquiry,* edited by N. K. Denzin & Y. S. Lincoln. Thousand Oakes, CA: Sage.

Thomas, P. A. (1990). *Cognitive development In a traditional and nontraditional nursing student population.* University of Connecticut: Unpublished doctoral dissertation.

Thomas, M. L. & Kuh, G.D. (1982). Understanding development during the early adult years: A composite framework. *The Personnel and Guidance Journal, 61*(l), 14-17.

Thompson, C., & Sheeckley, B. G. (1997) Differences in classroom teaching preferences between traditional and adult BSN students. *Journal of Nursing Education, 36*(4), 163-170.

Tinto, V. (1975). Dropout from higher educations: A theoretical synthesis of recent research. *Review of Higher Education, 8*, 319-340.

Tippins, D., Tobin, K., & Hook, K. (1993). Ethical decisions at the heart of teaching: Making sense from a constructivist perspective. *Journal of Moral Education, 22*(3), 221-240.

Tittle, C. K. & Denker, E. R. (1977). Re-entry women: A selective review of the educational process, career choice, and interest measurement. *Review of Educational Research, 47*(4), 531-584.

Thurber, F. W. (1988). A comparison of RN students in two types of baccalaureate completion programs. *Journal of Nursing Education, 27*(6), 266-273.

Tracy, S., & Schuttenberg, E. (1986). Exploring adult learners' rationale for course interaction preferences. *Adult Education Quarterly, 36*, 142-156.

Turner, R. (1966). Role-taking, role standpoint and reference-group behavior. In B. Biddle & E. Thomas (Eds.) *Role theory: Concepts and research* (p. 155). New York: John Wiley and Sons.

Vadeboncoeur, J. (1997). Child development and the purpose of education: A historical context for constructivism in teacher education. In V. Richardson (Ed.), *Constructivist teacher education: Building a world of new understandings* (pp. 15-37). London: Falmer.

Vanhanen, L., & Janhonen, S. (2000). Changes in students' orientation to nursing during nursing education. *Nurse Education Today, 20*, 654-661.

Von Eckartsberg, R. (1986). *Life-world experience. Existential-phenomenological research approaches in psychology*. Lanham, Maryland: University Press of America.

Vygotsky, L. (1978). *Mind in society: the development of higher psychological processes.* Cambridge, MA: Harvard University Press.

Vygotsky, L. (1986). *Thought and language* (A. Kozulin, ed.). Cambridge, MA: MIT Press.

Wade, G. H. (1998). A concept analysis of personal transformation. *Journal of Advanced Nursing, 28*(4), 713-719.

Wallhead, E. M. (1986). Developmental crises: Helping students grow. *Nurse Educator*. 11(3), 19-22.

Waltman, P., (1997). Comparison of traditional and non-traditional baccalaureate nursing students on selected components of Meichenbaum and Butler's model of test anxiety. *Journal of Nursing Education. 36*(4).

Waters, E. B. (1974). Exercising new options: Adult women compared with men and younger women at a community college. (Doctoral dissertation, Wayne State University, 1973). *Dissertation Abstracts International, 34*, 3896-3897.

Watson, J. (1988). Nursing: Human science and human care. A theory of nursing. Pub. No.15-2236. New York: National League of Nursing.

Watson, J. (Ed.). (1994). Applying the Art and Science of Human Caring. Pub. No. 42-2647. New York: National League of Nursing.

Weathersby, R. P. (1977). Q developmental perspective on adults' use of formal education. (Doctoral dissertation, Harvard University). Dissertation Abstracts International, 38A. 7085A-7086A (University Microfilms No. 78088621).

Wells, Gordon (1994). *Changes schools form within: Creating communities of inquiry.* Toronto/Portsmith, NH: OISE Press/Heinemann.

Werring, C. (1984). *A comparison of preferences toward the curriculum and instruction process of traditional and older aged undergraduate students at Texas Technical University.* (Doctoral Dissertation, University of Georgia, 1984).

Whelan E. G. (1984). Role-orientation change among RNs in an upper-division level baccalaureate program. *Journal of Nursing Education, 23*(4), 151-155.

Whitley, M. P., & Malen, A. L. (1987). Market research and nursings' dwindling applicant pool. *Nursing Economics, 5*(3), 130-136.

Winston, R. B. Jr., & Miller, T. K. (1987a). *Student developmental task and lifestyle inventory.* Athens, GA: Student Developmental Associates.

Winston, R. B. Jr., & Miller, T. K. (1987b). *Student developmental task and lifestyle inventory manual.* Athens, GA: Student Developmental Associates.

Winston, R. B. Jr., Miller, T. K., & Prince, J. S. (1979). *Assessing student development.* (A preliminary manual for the Student Developmental Task Inventory and the Student Developmental Profile and Planning Record.) Athens, Georgia: Student Developmental Associates, Inc.

Winston, R. B. Jr., & Polksonik, M. C. (1986). Student developmental task inventory (2nd edition): Summary of selected findings. *Journal of College Student Personnel, 27,* 548-539.

Woolley, A. S. (1973). Reaching and teaching the older student. *Nursing Outlook, 21*(l), 37-38.